From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 10:35 AM
To: 'Kaffer, Nancy'; Gray, Kathleen; Erb, Robin; Kristi Tanner - Detrot Free Press
Subject: RE: Embargoed media conf. call - Flint water action plan

Ok, if you guys can work to be on as few separate lines as possible, that's key.

There will be other media on call.

From: Kaffer, Nancy [mailto:nkaffer@freepress.com]
Sent: Friday, October 02, 2015 10:34 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Gray, Kathleen <kgray@freepress.com>; Erb, Robin <rerb@freepress.com>; Kristi Tanner - Detrot Free Press <ktanne@freepress.com>
Subject: RE: Embargoed media conf. call - Flint water action plan

Hi Sara – I think you can expect myself, Kathy, Robin, editors TBD and probably Keith Matheny and Stephen. Is this with Freep only or will other media be on the call?

Nancy Kaffer
Columnist
Detroit Free Press
www.freep.com/abettermichigan
313-222-6585
@nancykaffer, @abettermi

From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
Sent: Friday, October 02, 2015 9:34 AM
To: Gray, Kathleen <kgray@freepress.com>; Kaffer, Nancy <nkaffer@freepress.com>; Erb, Robin <rerb@freepress.com>; Kristi Tanner - Detrot Free Press <ktanne@freepress.com>
Subject: Embargoed media conf. call - Flint water action plan
Importance: High

Hi Kathy, Robin, Nancy & Kristi –

Per earlier conversations, below is information for a media conference call with Gov. Snyder and Cabinet leaders – MI Dept of Environmental Quality Director Dan Wyant of the, MI Dept of Health & Human Services Director Nick Lyon of the, and Dr. Eden Wells, the state's Chief Medical Executive – to outline a comprehensive action plan to further address Flint water concerns.

They will also be available to answer Qs.

As agreed by you and your teams, this information is fully embargoed until when the 1:30 p.m. press conference later today in Flint begins.

SPECIFIC CALL-IN DETAILS:
Topic: Flint water action plan
Date: Friday, Oct. 2
Time: 11:15 a.m.
Conference Line call-in number: [redacted]
Conference line passcode: [redacted]
** To ask a question during that portion of the call, please press "0." (but please refrain from pressing zero until opening remarks are completed to help ensure you don't miss any of the details).

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Please let us know if who from Detroit Free Press plan to participate or if you need anything else at all.

Thanks so much,
SW

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted], mobile
Twitter:@SaraLW

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 10:48 AM
To: Rick Pluta - MPRN; Zoe Clark - MI Radio
Subject: Embargoed media conf. call - Flint water action plan

Importance: High

Hi there Pluta and Zoe -

Per earlier conversation, below is information for a media conference call with Gov. Snyder and Cabinet leaders – MI Dept of Environmental Quality Director Dan Wyant of the, MI Dept of Health & Human Services Director Nick Lyon of the, and Dr. Eden Wells, the state's Chief Medical Executive – to outline a comprehensive action plan to further address Flint water concerns.

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Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 10:52 AM
To: Steve Carmody - Michigan Radio
Subject: FW: Embargoed media conf. call - Flint water action plan

Importance: High

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 10:48 AM
To: Rick Pluta - MPRN <rickp@mprn.org>; Zoe Clark - MI Radio <zoeclark@umich.edu>
Subject: Embargoed media conf. call - Flint water action plan
Importance: High

Hi there Pluta and Zoe -

Per earlier conversation, below is information for a media conference call with Gov. Snyder and Cabinet leaders – MI Dept of Environmental Quality Director Dan Wyant of the, MI Dept of Health & Human Services Director Nick Lyon of the, and Dr. Eden Wells, the state's Chief Medical Executive – to outline a comprehensive action plan to further address Flint water concerns.

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SW

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 11:24 AM
To: Maloney, Damon
Subject: Re: Embargoed media conf. call - Flint water action plan

Absolutely

Sent from my iPhone

On Oct 2, 2015, at 11:13 AM, Maloney, Damon <damon.maloney@abc12.com> wrote:

> Hi Sara - we can record audio from 1115 conference call- fully understanding all is embargoed until 130 news conference at Kettering ??
>
> Damon Maloney
> abc12 News
> Sent from my iPhone
>
> On Oct 2, 2015, at 9:38 AM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:
>
> > Hi there Damon -
> >
> > Per earlier conversations, below is information for a media conference call with Gov. Snyder and Cabinet leaders – MI Dept of Environmental Quality Director Dan Wyant of the, MI Dept of Health & Human Services Director Nick Lyon of the, and Dr. Eden Wells, the state's Chief Medical Executive – to outline a comprehensive action plan to further address Flint water concerns.
> >
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> >
> > SPECIFIC CALL-IN DETAILS:
> > **Topic**: Flint water action plan
> > **Date**: Friday, Oct. 2
> > **Time**: 11:15 a.m.
> > **Conference Line call-in number**: [redacted]
> > **Conference line passcode:** [redacted]
> > ** To ask a question during that portion of the call, please press "0." (but please refrain from pressing zero until opening remarks are completed to help ensure you don't miss any of the details).
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Thanks so much,
SW

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 11:30 AM
To: Davey, Monica
Cc: Murray, David (GOV)
Subject: Re: Monica checking

Hi there Monica -

Governor not in Flint today but he's hosting an embargoed media conf right NOW. If you can join us, please do. I can walk you through afterward too if not.

Gov. Snyder and Cabinet leaders – MI Dept of Environmental Quality Director Dan Wyant of the, MI Dept of Health & Human Services Director Nick Lyon of the, and Dr. Eden Wells, the state's Chief Medical Executive – to outline a comprehensive action plan to further address Flint water concerns.

They will also be available to answer Qs.

This information is fully embargoed until when the 1:30 p.m. press conference later today in Flint begins.

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Topic: Flint water action plan
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Time: 11:15 a.m.
Conference Line call-in number: [redacted]
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Please let me know if you need anything else at all in interim.

Sent from my iPhone

On Oct 2, 2015, at 11:01 AM, Davey, Monica <davey@nytimes.com> wrote:

> Sara and Dave:
> Is the governor going to be at the Flint Water presser?
> If not, will he have remarks after?
> If there are plans for a trip there, when is he expecting to go there?
> Thanks
> Monica

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 12:41 PM
To: Livengood, Chad
Cc: Murray, David (GOV); Lynch, James
Subject: Re: Embargoed media conf. call - Flint water action plan

Water tested at all public schools-traditional and charters. We're also offering it to all parochial schools.

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

On Oct 2, 2015, at 11:47 AM, Livengood, Chad <CLivengood@detroitnews.com> wrote:

> Sara or Dave,
>
> Quick follow-up question: In reference to the plan to immediately test water coming out of the faucets of all schools in Flint Community Schools, will the water at Flint's public charter schools be tested as well? I don't have an exact count, but I'm guessing there are a half-dozen or more charter schools in Flint.
>
> -Chad
>
> ---
> Chad Livengood
> Capitol Reporter
> The Detroit News
> Lansing bureau: (517) 371-3660
> Cell: [redacted]
> clivengood@detroitnews.com
> Twitter.com/ChadLivengood
>
> **From:** Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
> **Sent:** Friday, October 02, 2015 9:48 AM
> **To:** Lynch, James <JLynch@detroitnews.com>; Livengood, Chad <CLivengood@detroitnews.com>
> **Subject:** Embargoed media conf. call - Flint water action plan
> **Importance:** High
>
> Hi there Jim and Chad –
>
> Per earlier conversations, below is information for a media conference call with Gov. Snyder and Cabinet leaders – MI Dept of Environmental Quality Director Dan Wyant of the, MI Dept of Health & Human Services Director Nick Lyon of the, and Dr. Eden Wells, the state's Chief Medical Executive – to outline a comprehensive action plan to further address Flint water concerns.

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Thanks so much,
SW

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Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 12:58 PM
To: Kennedy, Jordan (GOV)
Subject: Flint docs

Can you please send me an email with just the latest news release and final infographics in it ASAP? Thanks!

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 1:03 PM
To: Monica Davey - NY Times
Subject: Fwd: Flint water action plan
Attachments: Infographic - Flint water tips 10-2-15.pdf; ATT00001.htm; NR 151002 - Flint water action plan DM.docx; ATT00002.htm; Infographic - Flint Water Action Plan 10-2-15.pdf; ATT00003.htm

Attached and below…

Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns
Collaborative effort with state, federal and city leaders focuses on testing, assistance

FLINT, Mich. – Flint residents need to have access to safe, clean, water now and long into the future, Gov. Rick Snyder said, announcing a comprehensive action plan created with state, federal and city leaders to address concerns about drinking water.

The water leaving Flint's drinking water system is safe to drink, but some families with lead plumbing in their homes or service connections could experience higher levels of lead in the water that comes out of their faucets.

The action plan focuses on increasing water testing, offering additional precautions for families with lead plumbing in their homes, and providing long-term solutions to address the city's water infrastructure challenges.

The plan was created at Snyder's direction by the Michigan Departments of Environmental Quality (DEQ) and Health and Human Services (DHHS), the U.S. Environmental Protection Agency, and the city of Flint.

"We are focused on helping ensure safe, clean, accessible drinking water and addressing and mitigating concerns and protecting public health," Snyder said. "Today's action plan builds upon ongoing work with local, state and federal agencies and our partnership with city and community leaders. Together, we are working to ensure that all Flint residents have accurate information and know that help is available to address potential problems."

The city and the state also are working together to gather more data to ensure the water that leaves the treatment plant as well as the water that arrives in Flint homes is safe for all residents. The plan includes:

- Testing in Flint public schools immediately to ensure that drinking water is safe, with testing also available at no cost to any other school in Flint.
- Offering free water testing to Flint residents to assure their drinking water is safe.
- Providing free water filters to residents.
- Expanding health exposure testing of individual homes.
- Accelerating corrosion controls in the Flint drinking water system.
- Accelerating water system improvements to address replacing lead service lines.
- Expediting the completion of the Karegnondi Water Authority pipeline.
- Expanding a Safe Drinking Water Technical Advisory Committee to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the Flint drinking water public health adviser.

• Boosting a comprehensive lead education program to make sure residents have detailed information about how to protect themselves and their homes.

Residents can have their water tested by calling 810-787-6537 and pressing 1, or emailing flintwater@cityofflint.com. The DEQ is covering the cost of this testing.

State leaders have been working closely with state and federal lawmakers to tap resources at all levels of government to address concerns.

State health experts said there has been an increase in elevated childhood blood lead levels in some specific communities. Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend. While this analysis for Flint as a whole remains true, a comprehensive and detailed review breaking down data by ZIP codes with the city revealed that MDHHS data is consistent with a study presented recently by Hurley Children's Hospital.

"While we cannot conclusively say that the water source change is the sole cause of the increase, this analysis supports our efforts as we take active steps to reduce all potential lead exposures in Flint," MDHHS Director Nick Lyon said. "As part of this, we are working closely with our public and private partners to provide Flint residents on MDHHS assistance programs with free water filters and inform families about the steps they can take to reduce all lead exposures in their home."

As a part of the action plan, National Sanitation Foundation certified water filters will be made available to Flint residents through emergency state funds and coordinated efforts with local community agencies and donors. Information about how to obtain the filters will soon be available.

"This action plan offers concrete steps we will take in a local, state and federal partnership to ensure all Flint residents have safe water to drink," DEQ Director Dan Wyant said. "The DEQ will work closely with the city to gather further data to ensure the water that leaves Flint's system as well as the water that arrives in Flint homes is safe to drink."

Additional information is available at www.michigan.gov/flintwater.

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

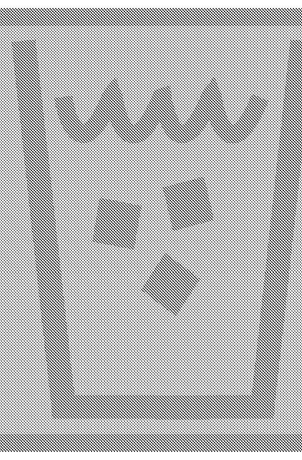
TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- Tips for Flint Residents -

Lead plumbing is common in homes built prior to 1986, and **anyone in the state with lead pipes in their home can take some extra precautions** to minimize lead in their drinking water.

1. Get your water tested at no cost to ensure water is safe. **To get your water tested**, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.

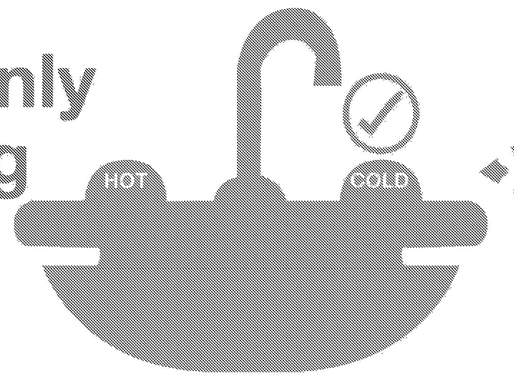


2. To ensure safe drinking water, you can also get a free filter. Please visit **mi.gov/FlintWater** to find where you can get a free filter.

3. It takes time for lead to accumulate in drinking water from plumbing, and so **flushing your pipes prior to using them** can minimize your exposure.

- To flush your pipes, run the water until it's as cold as it will go. This can take as little as 5 to 30 seconds if you have recently flushed the toilet or otherwise used water in your home, or as long as 2 to 5 minutes if you have not used any water in hours.
- In the city of Flint, **running the water for 5 minutes costs between 3 and 16 cents.**

4. Additionally, more lead gets into hot water than cold water. **Use only cold water for drinking, cooking and making baby formula.**



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Visit **www.mi.gov/FlintWater** for more information

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray Governor's Office: 517-335-6397 Brad Wurfel, 517-284-6713 Department of Environmental Quality Jennifer Eisner, 517-230-9804 Department of Health and Human Services	Friday, Oct. 2, 2015

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Collaborative effort with state, federal and city leaders focuses on testing, assistance

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Additional information is available at www.michigan.gov/flintwater.

###

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

- Testing in Flint public schools immediately to ensure that **drinking water is safe**, with testing also available at no cost to any other school in Flint.
- **Offering free water testing** to Flint residents to assure their drinking water is safe.
- **Providing free water filters** to residents with concerns or who are included in state assistance programs.
- **Expanding health exposure testing** of individual homes.
- **Accelerating corrosion controls** in the Flint drinking water system.
- **Accelerating water system improvements** to address replacing lead service lines.
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Visit www.mi.gov/FlintWater for more information

From: Wurfel, Sara (GOV)
Sent: Friday, October 02, 2015 5:36 PM
To: 'Dave Bondy'
Subject: RE: STATEMENT

We're going to continue to work openly, transparently and collaboratively with all partners at the local, state and federal levels to ensure safe, clean, accessible drinking water for Flint residents. Our state team will continue to stay focused on that task and doing everything possible and bringing all technical expertise and possible resources to bear.

From: Dave Bondy [mailto:dbondy@sbgtv.com]
Sent: Friday, October 02, 2015 5:28 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: STATEMENT

"well anyone who has followed this story from the start realizes that the state has zero credibility, they created this problem, they have taken steps to cover it up and im not hearing any signs that they are admitting their mistakes and giving people straight answers"

From: Wurfel, Sara (GOV)
Sent: Monday, October 05, 2015 12:15 PM
To: 'Macaluso, Nora'; Murray, David (GOV)
Subject: RE: News Release: Flint Water Crisis Action, Probe Urged

Nora –

Would say that we believe protecting public health is paramount and safe, clean, accessible drinking water is essential. The Governor and Administration, through both DEQ and the MI Dept of Health & Human Services, have outlined a collaborative, comprehensive action plan to help ensure just that as well as public confidence, and that we're all working together across local, state and federal levels to bring all resources and ideas to bear.

Thanks and best,
SW

From: Macaluso, Nora [mailto:nmacaluso@bna.com]
Sent: Monday, October 05, 2015 9:41 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: FW: News Release: Flint Water Crisis Action, Probe Urged

Good morning. Do you have any comment on this request for an investigation? Is the governor looking into how the DEQ missed the problem? Writing today, deadline 4 p.m. Though of course this is an ongoing story.

Thanks ..

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Nora Macaluso
Staff Correspondent

Bloomberg BNA

Direct/Mobile [redacted]
nmacaluso@bna.com

From: Michigan Chapter Sierra Club [mailto:michigansierraclubmedia@gmail.com]
Sent: Friday, October 02, 2015 4:11 PM
Subject: News Release: Flint Water Crisis Action, Probe Urged

Sierra Club Calls For Urgent Action on Snyder Water Plan, Probe of Michigan Department of Environmental Quality

FOR IMMEDIATE RELEASE

Friday, October 2, 2015

Media Contact: David Holtz, david@davidholtz.org/313-300-4454

LANSING—Sierra Club today called on Gov. Rick Snyder to act decisively and urgently to implement plans to end the public health crisis in Flint and to support an independent investigation into the Michigan Department of Environmental Quality's oversight of federal drinking water laws.

"Given the clear risks to vulnerable populations and the state's public health responsibilities this is a time for strong leadership and accountability from state public health authorities and the governor," said **David Holtz**, **Sierra Club** Michigan Chair. "The governor, finally, is assuming direct responsibility for responding to a crisis that every day is damaging the health of Flint's children. His actions should be much stronger, however, and he needs to find out how we got to the point where Flint children are drinking lead and what the MDEQ's role was in those decisions and actions."

The Snyder administration today outlined a series of steps they will take to address Flint's public health crisis. They include accelerated and expanded water treatment, providing filters to some residents, expanded testing of residents and an examination of whether to temporarily switch back to the Detroit water system. Replacing Flint's lead pipes over time were also on the administration's to-do list.

Sierra Club Michigan Director **Gail Philbin** said only independent testing of Flint's water for lead will be credible because of questions raised regarding the city and MDEQ's handling of past test results.

"Parents need to know drinking water is safe for their children," said Philbin. "Immediately they need credible testing for lead and alternatives to contaminated water. The likely best way

to ensure safe drinking water in Flint is to change to a safe and reliable drinking water source and that's Detroit's water system and to eliminate lead pipes."

Investigations by the ACLU and nationally recognized drinking water expert Marc Edwards at Virginia Tech University have pointed to failures in testing and enforcement of federal drinking water standards by the Michigan Department of Environmental Quality. An MDEQ spokesman reportedly attacked Virginia Tech's results and complained about the "near-hysteria" over Flint's water supply. The Virginia Tech researcher documented what he called "mistakes and deception" involving the MDEQ's handling of Flint's drinking water problem.

"Along with ensuring Flint residents aren't drinking lead, we need for the governor to ensure that the public gets answers to what happened and why we ended up with a public health crisis in Flint," said Holtz. "That will require an independent investigation. If that's something Governor Snyder is unwilling to do we need federal authorities to determine to what extent, if any, state officials who are responsible for implementing federal drinking water standards are accountable for the public health crisis in Flint."

The Greater Flint Health Coalition, a group of health professionals in the Flint community, has concluded that Flint's drinking water is unsafe because of elevated lead blood levels. The city of Flint began using the Flint River as a water source in April 2014 following a decision made by emergency manager Darnell Earley.

Centers for Disease Control and Prevention studies show that lead in drinking water can cause serious health problems and that the greatest risk of lead exposure is to infants, young children and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children.

##

From: Wurfel, Sara (GOV)
Sent: Monday, October 05, 2015 2:48 PM
To: Lasher, Geralyn (DHHS); Eisner, Jennifer (DHHS); Minicuci, Angela (DHHS)
Cc: Murray, David (GOV); Hollins, Harvey (GOV)
Subject: FW: water filter distribution

Importance: High

Guys – please share an update on this asap.

Also, have heard from CBS Evening News. They'll be in Flint today and tomorrow. Need to chat with you about that.

Please call as soon as can.

Thanks much,
SW

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, October 05, 2015 2:46 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: water filter distribution

Sara:
I'm expecting to write a story about the efforts to distribute water filters that have so far come into Flint from several sources.
Are the state-funded filters being distributed through the Genesee County Health Department and United Way or through state offices such as the Department of Human Services, or both?
Have the state-funded filters begun to arrive in Flint and does your office want to comment on the efforts to distribute the filters so far?
You may have heard that the initial distribution was expanded Saturday to include all residents because there were far more filters than low income families that qualified who turned out to request one.
Thanks for your help.
Call is it's easier

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Monday, October 05, 2015 3:37 PM
To: 'Kaffer, Nancy'; Wurfel, Brad (DEQ)
Cc: Wisely, John
Subject: RE: Follow-up questions

Sorry, Nancy. I though these were long covered with all follow up that was done afterward and on site with Robin.

Will touch base with DEQ team and be back in touch asap.

From: Kaffer, Nancy [mailto:nkaffer@freepress.com]
Sent: Monday, October 05, 2015 2:49 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>
Cc: Wisely, John <jwisely@freepress.com>
Subject: FW: Follow-up questions
Importance: High

Hi Sara -- sent these last week and got no response. Figured some of these are MDEQ questions, so I'm adding Brad onto the list, here.

ASAP would be great.

Thanks!

N

Nancy Kaffer
Columnist
Detroit Free Press
www.freep.com/abettermichigan
313-222-6585
@nancykaffer, @abettermi

From: Kaffer, Nancy
Sent: Friday, October 02, 2015 12:06 PM
To: 'Wurfel, Sara (GOV)' <Wurfels@michigan.gov>
Subject: Follow-up questions
Importance: High

- Reviewing my notes, I'm not sure I got a definitive answer from Wyant about corrosion control at the Flint water treatment plant.
  Was corrosion control in use? I'd like a simple yes or no, here – if no, obviously, why not – if yes, what was it, and why was – if any – what sounds like a lesser degree of corrosion control being used? I would like the names of the specific technologies/chemicals that were in use in the past, if in fact corrosion control was being used at the Flint plant, and the specific technologies that will be used going forward.

- Was the MDEQ unaware that there were aging lead service lines in Flint, and that those would increase the lead risk? Were the Flint water treatment folks? Why was this not taken into account in developing the water treatment plan?
- Wyant said that "two consecutive back to back tests" showed there was a problem; when were those tests performed and when were the results available?

Obviously I would like to use this information in a piece we'll have ready to go at 1:30p so ASAP would be great.

Nancy Kaffer
Columnist
Detroit Free Press
www.freep.com/abettermichigan
313-222-6585
@nancykaffer, @abettermi

From: Wurfel, Sara (GOV)
Sent: Monday, October 05, 2015 3:53 PM
To: 'Ronald Fonger'; Minicuci, Angela (DHHS); Eisner, Jennifer (DHHS)
Cc: Murray, David (GOV)
Subject: RE: water filter distribution

State teams have been working throughout the weekend with the local community and partners to get this finalized and this action step mobilized as soon as possible from state's comprehensive plan announced Friday, Ron.

Looping in Angela and Jen from the MI Dept of Health and Human Services here who can walk you through the details, but essentially filters will be available starting tomorrow morning at both the two MDHHS offices in Flint as well as the two Genesee Co. Community Action Resource Dept offices in Flint.

Great example of the collaboration underway and that's so key to addressing this issue together.

I know you'll be hearing from the soon.

Thanks and best,
SW

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, October 05, 2015 2:46 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: water filter distribution

Sara:
I'm expecting to write a story about the efforts to distribute water filters that have so far come into Flint from several sources.
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Call is it's easier

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Monday, October 05, 2015 3:57 PM
To: Murray, David (GOV)
Subject: RE: Release on Flint

Both – clients should go to DHHS office, all others should go to local Community Action Agency location – though either can go to other locations and walk out door with filter by same form/policy to ensure "no wrong door" and make as easy as possible. But they are trying to direct folks accordingly. Outlined in 2nd graph – not clear enough?

From: Murray, David (GOV)
Sent: Monday, October 05, 2015 3:52 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Re: Release on Flint

I'm confused after reading the release. Does this deal just with filters for the clients, or for everyone?

Sent from my iPad

On Oct 5, 2015, at 3:42 PM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:

> Talked at length with Geralyn about this just now. Think is a good thing, and shows immediate follow up from action steps announced Friday. Added bonus is that it should be pretty easy for Flint clients and residents and have a "no wrong door" approach too just in case. Please see attached and below.
>
> This is slated for distribution at 4 p.m. Need to hear if any concerns from anyone ASAP.
>
> Otherwise, it's a go.
>
> Thanks much,
> SW
>
> ---
>
> **From:** Lasher, Geralyn (DHHS)
> **Sent:** Monday, October 05, 2015 3:19 PM
> **To:** Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Priest, Chris (GOV) <PriestC1@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
> **Cc:** Eisner, Jennifer (DHHS) <EisnerJ@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>; Kennedy, Jordan (GOV) <Kennedyj4@michigan.gov>; Hertel, Elizabeth (DHHS) <HertelE@michigan.gov>
> **Subject:** Release on Flint
> **Importance:** High
>
> Attached is the draft release we would like to issue ASAP regarding the new plan for water filter distribution in the city of Flint.

At a meeting with multiple community partners today, our local MDHHS office realized they could do distribution from the 2 Flint offices as long as the local community action agency could assist them in storing the larger quantities of filters.

Locally, the groups will be issuing a press release from the local health department discussing distribution, but we feel it is important to also send this from MDHHS.

We are happy to discuss this with Ron Fonger if you want him to be the first press call we make once we issue it.

<Flint Filters Press Release 10515.pdf>

From: Wurfel, Sara (GOV)
Sent: Monday, October 05, 2015 5:31 PM
To: Charlie Brooks - CBS News
Cc: Minicuci, Angela (DHHS); Wheaton, Bob (DHHS)
Subject: FW: FOR IMMEDIATE RELEASE: Water filters available for MDHHS clients, all Flint residents beginning Tuesday

Importance: High

Greetings, Charlie –

Good talking with you earlier today. We're happy to help connect you with state experts and resources as possible.

You had asked about filters. Two components of the state's action plan announced this past Friday will be mobilized tomorrow with free filters available for all DHHS clients in the area as well as any other Flint resident. (See details below).

I'm looping in the two folks here – both at the MI Dept of Health & Human Services – who can work with you and your team on securing an interview with one of the DHHS leads on the ground as well as securing footage as possible. (Just have to work through some privacy and confidentiality rules re: clients).

Angela and Bob – per our conversation, Charlie is a producer for CBS Evening News with a team in Flint today and tomorrow. They were looking for opportunities like this. Please work with him to make arrangements and see what's feasible and workable.

Thanks all,
SW

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

From: Michigan Department of Health and Human Services [mailto:MDHHS@govsubscriptions.michigan.gov]
Sent: Monday, October 05, 2015 4:09 PM
To: Lasher, Geralyn (DHHS) <lasherg@michigan.gov>
Subject: FOR IMMEDIATE RELEASE: Water filters available for MDHHS clients, all Flint residents beginning Tuesday

Press Release

FOR IMMEDIATE RELEASE: October 5, 2015

CONTACT: Jennifer Eisner, (517) 241-2112

Water filters available for MDHHS clients, all Flint residents beginning Tuesday

LANSING, Mich. – Free water filters will be available to current Michigan Department of Health and Human Services clients and Flint residents at four locations beginning Tuesday, October 6, at 9 a.m. through a partnership between the MDHHS and the Genesee County Community Action Resource Department. Free National Sanitation Foundation certified water filters are being provided to Flint residents as part of the administration's comprehensive approach to addressing water concerns in the area.

Current MDHHS clients are encouraged to visit either the 125 E. Union St. or 4809 Clio Road MDHHS office location to obtain a free, certified home water filter. Residents who are not currently enrolled in MDHHS assistance programs should visit the Genesee County Community Action Resource Department offices located at 2727 Lippincott and 601 North Saginaw in Flint. Staff will be onsite at all four locations from 9 a.m. to 4 p.m., Monday through Friday, to distribute filters and assist residents who have questions about proper installation.

"Ensuring that families in the Flint area have access to resources that will help reduce the potential for lead exposure is our top priority," said Nick Lyon, director of the MDHHS. "I want to thank our partners who have mobilized to make water filters available – a point that highlights the importance of continued collaboration at the local, state and federal level as we move forward."

MDHHS clients in the city of Flint who are active Family Independence Program (FIP), Food Assistance Program (FAP), Child Development and Care (CDC), State Disability Assistance (SDA), or Social Security Insurance (SSI) recipients should bring valid identification and a copy of their water bill to their local MDHHS office to receive their filter free of charge. Flint residents who are not active MDHHS clients should bring identification and their water bill to the GCCARD location.

Although blood lead levels throughout the city of Flint have remained steady, last week, MDHHS data was found to be consistent with a recent Hurley Children's Hospital study indicating increased blood lead levels in children residing in two Flint ZIP codes after a 2014 change in water source. While lead paint remains the number one cause of lead poisoning in Michigan, the recent data

prompted MDHHS to take action to reduce potential lead exposures through water sources.

MDHHS is urging parents in Flint and throughout the state to do their part in preventing elevated blood lead levels in children. For more information about steps you can take now, visit www.michigan.gov/lead, or contact your local health department. For updates on Flint water and available resources, visit www.michigang.gov/flintwater.

###

- Flint Filters Press Release 10515.pdf

Become a foster parent through Michigan Department of Health & Human Services foster care program.

Questions? Contact Us

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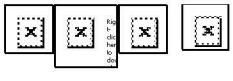

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From: Wurfel, Sara (GOV)
Sent: Monday, October 05, 2015 5:42 PM
To: 'Kyle Melinn'
Subject: RE: What Ananich said

Sigh. Here's what I say in response to that …

The Governor and our Administration are deeply committed to building solid and strong communities and a Michigan that works for everyone – regardless of an area's makeup or socioeconomic status. That certainly includes Flint.

Would hope some of our past work and collaboration specifically in the city of Flint can help demonstrate that clearly, from the Secure Cities public safety initiative and targeted resources to help the city tackle that issue as well as infrastructure needs to continued, ongoing dialogue on so many issues with community, faith and business leaders and residents. We are committed to partnering with the city of Flint and collaborating across local, state and federal levels to bring all resources and ideas to bear.

From: Kyle Melinn [redacted]
Sent: Monday, October 05, 2015 4:46 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: What Ananich said

Sara -

I've attached what I've written on Ananich's comments on the podcast. Let me know how you want to respond. Appreciate it!

Kyle

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 9:14 AM
To: 'Ronald Fonger'
Subject: RE: governors team

Sorry, Ron, I can't see any of the text below after "WJRT is reporting" ... other than "water crisis." What's the Q?

Though you know the state team will start today its distribution of water filters at both DHHS offices for state assistance clients and through GCARD offices for any other Flint resident, yes?

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Tuesday, October 06, 2015 9:08 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: governors team

Sara:
Can you fill me in on what's happening in Flint today?
WJRT is reporting **"Members of the state's team handling the** water crisis **will be in Flint on Tuesday to work with local leaders on how to move forward."**
Thanks for your help

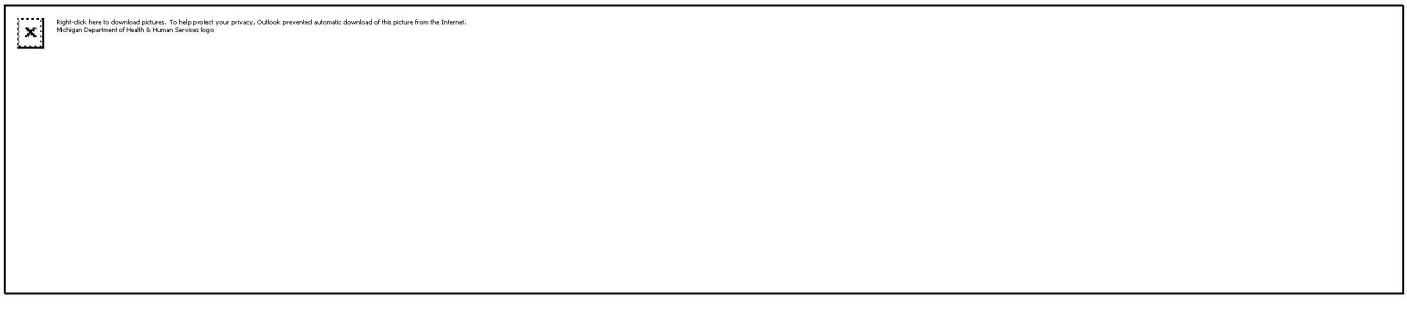
Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 10:51 AM
To: Stoken, Laura (GOV)
Subject: FW: FOR IMMEDIATE RELEASE: Water filters available for MDHHS clients, all Flint residents beginning Tuesday

Importance: High

From: Michigan Department of Health and Human Services [mailto:MDHHS@govsubscriptions.michigan.gov]
Sent: Monday, October 05, 2015 4:09 PM
To: Lasher, Geralyn (DHHS) <lasherg@michigan.gov>
Subject: FOR IMMEDIATE RELEASE: Water filters available for MDHHS clients, all Flint residents beginning Tuesday



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FOR IMMEDIATE RELEASE: October 5, 2015

CONTACT: Jennifer Eisner, (517) 241-2112

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###

- Flint Filters Press Release 10515.pdf

Become a foster parent through Michigan Department of Health & Human Services foster care program.

Questions? Contact Us

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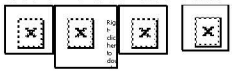

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From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 11:35 AM
To: Lasher, Geralyn (DHHS); Minicuci, Angela (DHHS); Eisner, Jennifer (DHHS)
Subject: FW: PHONE MESSAGE: Stephanie Parkinson - NBC 25 Flint

Importance: High

What's the story and full details on this?

From: Ruestman, Alexa (GOV)
Sent: Tuesday, October 06, 2015 11:33 AM
To: Wurfel, Sara (GOV) <WurfelS@michigan.gov>
Cc: Agen, Jarrod (GOV) <AgenJ@michigan.gov>
Subject: PHONE MESSAGE: Stephanie Parkinson - NBC 25 Flint

Name: Stephanie Parkinson
Outlet: NBC 25 Flint
Email: sparkinson@sbgtv.com
Phone: 810-247-1276
Re: Flint Water, filter giveaway
"We have been told that the filters given out in Flint are good for 100 gallons, what are people supposed to do once they surpass that limit?"
Deadline: this afternoon

Alexa Ruestman
Communications Intern
Executive Office of the Governor
RuestmanA@michigan.gov

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 11:42 AM
To: Eisner, Jennifer (DHHS)
Cc: Lasher, Geralyn (DHHS); Minicuci, Angela (DHHS)
Subject: RE: Flint Water Filters

Very helpful. Thx much.

What is anticipated cost of filter cartridge replacement?

Also, we're needing to send the Governor daily updates for his briefing on this issue. Would be great to have recap of today's first distribution by 4 p.m. -- how went, how many given out/clients served, overall reax/reception, etc. And anything else of note that's important or key.

From: Eisner, Jennifer (DHHS)
Sent: Tuesday, October 06, 2015 11:37 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>
Subject: Fwd: Flint Water Filters

FYI

Sent from my iPhone

Begin forwarded message:

> **From:** "Thompson, Sheryl D. (DHHS)" <ThompsonS2@michigan.gov>
> **Date:** October 6, 2015 at 11:33:56 AM EDT
> **To:** "Eisner, Jennifer (DHHS)" <EisnerJ@michigan.gov>
> **Cc:** "Lasher, Geralyn (DHHS)" <lasherg@michigan.gov>, "Hertel, Elizabeth (DHHS)" <HertelE@michigan.gov>, "Minicuci, Angela (DHHS)" <MinicuciA@michigan.gov>
> **Subject: Re: Flint Water Filters**
>
> Yes we are doing filter replacements. This is why we are verifying addresses and contact numbers in a database in addition to the types of water filters residents received.
>
> I'm on my way back to Lippincott right now.
>
> Sheryl Thompson
> Deputy Director of Field Ops
> 517-241-5954
>
> On Oct 6, 2015, at 11:31 AM, Eisner, Jennifer (DHHS) <EisnerJ@michigan.gov> wrote:

Do we have an answer on this?

Sent from my iPhone

Begin forwarded message:

> **From:** "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
> **Date:** October 6, 2015 at 11:21:02 AM EDT
> **To:** "Eisner, Jennifer (DHHS)" <EisnerJ@michigan.gov>
> **Subject: Fwd: Flint Water Filters**
>
> You taking these calls?
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** Stephanie Parkinson <sparkinson@sbgtv.com>
> > **Date:** October 6, 2015 at 11:04:15 AM EDT
> > **To:** "WurfelB@michigan.gov" <WurfelB@michigan.gov>
> > **Subject: Flint Water Filters**
> >
> > Brad,
> >
> > We are being told the free water filters for people living in Flint must be replaced after 100 gallons. What happens after that, will there be replacement filters handed out when that need arises?
> >
> > Thanks.
> >
> > **Stephanie Parkinson**
> > Anchor/Reporter
> > NBC25
> > Flint, Michigan
> >
> > **Newsroom:** 810-687-9600
> > **Twitter:** StephaniePNews

25
nbc25news.com
FOX66
wsmh.com
THE CW46
thecw46.com

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 11:45 AM
To: 'sparkinson@sbgtv.com'
Subject: FW: PHONE MESSAGE: Stephanie Parkinson - NBC 25 Flint

Importance: High

Greetings, Stephanie –

My understanding is that plan is to also offer and provide filter replacements when needed. Team is tracking type of filter and contact information to help ensure.

Having Jennifer Eisner from the MI Dept of Health & Human Services get in touch with you asap to confirm and walk through details. Just in case, she's at [redacted]

From: Ruestman, Alexa (GOV)
Sent: Tuesday, October 06, 2015 11:33 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Agen, Jarrod (GOV) <AgenJ@michigan.gov>
Subject: PHONE MESSAGE: Stephanie Parkinson - NBC 25 Flint

Name: Stephanie Parkinson
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Deadline: this afternoon

Alexa Ruestman
Communications Intern
Executive Office of the Governor
RuestmanA@michigan.gov

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 11:47 AM
To: Eisner, Jennifer (DHHS)
Cc: Lasher, Geralyn (DHHS); Minicuci, Angela (DHHS)
Subject: RE: Flint Water Filters

Also, what is status of interview time and arrangements with CBS Evening News? Please keep us posted on those details too.

Thx!

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 11:42 AM
To: Eisner, Jennifer (DHHS) <EisnerJ@michigan.gov>
Cc: Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>
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Very helpful. Thx much.

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To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>
Subject: Fwd: Flint Water Filters

FYI

Sent from my iPhone

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> **Cc:** "Lasher, Geralyn (DHHS)" <lasherg@michigan.gov>, "Hertel, Elizabeth (DHHS)" <HertelE@michigan.gov>, "Minicuci, Angela (DHHS)" <MinicuciA@michigan.gov>
> **Subject: Re: Flint Water Filters**
>
> Yes we are doing filter replacements. This is why we are verifying addresses and contact numbers in a database in addition to the types of water filters residents received.

I'm on my way back to Lippincott right now.

Sheryl Thompson
Deputy Director of Field Ops
517-241-5954

On Oct 6, 2015, at 11:31 AM, Eisner, Jennifer (DHHS) <EisnerJ@michigan.gov> wrote:

> Do we have an answer on this?
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
> > **Date:** October 6, 2015 at 11:21:02 AM EDT
> > **To:** "Eisner, Jennifer (DHHS)" <EisnerJ@michigan.gov>
> > **Subject: Fwd: Flint Water Filters**
> >
> > You taking these calls?
> >
> > Sent from my iPhone
> >
> > Begin forwarded message:
> >
> > > **From:** Stephanie Parkinson <sparkinson@sbgtv.com>
> > > **Date:** October 6, 2015 at 11:04:15 AM EDT
> > > **To:** "WurfelB@michigan.gov" <WurfelB@michigan.gov>
> > > **Subject: Flint Water Filters**
> > >
> > > Brad,
> > >
> > > We are being told the free water filters for people living in Flint must be replaced after 100 gallons. What happens after that, will there be replacement filters handed out when that need arises?
> > >
> > > Thanks.
> > >
> > > **Stephanie Parkinson**
> > > Anchor/Reporter
> > > NBC25
> > > Flint, Michigan
> > >
> > > **Newsroom:** 810-687-9600
> > > **Twitter:** StephaniePNews

nbc25news.com
wsmh.com
thecw4

25
nbc25news.com
FOX66
wsmh.com
THE CW46
thecw46.com

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 12:14 PM
To: Eisner, Jennifer (DHHS)
Cc: Lasher, Geralyn (DHHS); Minicuci, Angela (DHHS)
Subject: RE: Flint Water Filters

Good. Also going to visit one of the offices distributing filters and/or talking with Sheryl Thompson?

From: Eisner, Jennifer (DHHS)
Sent: Tuesday, October 06, 2015 12:10 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>
Subject: Re: Flint Water Filters

Dan is being interviewed now. They've talked to a few residents

Sent from my iPhone

On Oct 6, 2015, at 11:47 AM, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov> wrote:

> Also, what is status of interview time and arrangements with CBS Evening News? Please keep us posted on those details too.
>
> Thx!
>
> ---
>
> **From:** Wurfel, Sara (GOV)
> **Sent:** Tuesday, October 06, 2015 11:42 AM
> **To:** Eisner, Jennifer (DHHS) <EisnerJ@michigan.gov>
> **Cc:** Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>
> **Subject:** RE: Flint Water Filters
>
> Very helpful. Thx much.
>
> What is anticipated cost of filter cartridge replacement?
>
> Also, we're needing to send the Governor daily updates for his briefing on this issue. Would be great to have recap of today's first distribution by 4 p.m. – how went, how many given out/clients served, overall reax/reception, etc. And anything else of note that's important or key.
>
> ---
>
> **From:** Eisner, Jennifer (DHHS)
> **Sent:** Tuesday, October 06, 2015 11:37 AM
> **To:** Wurfel, Sara (GOV) <Wurfels@michigan.gov>
> **Cc:** Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>
> **Subject:** Fwd: Flint Water Filters

FYI

Sent from my iPhone

Begin forwarded message:

> **From:** "Thompson, Sheryl D. (DHHS)" <ThompsonS2@michigan.gov>
> **Date:** October 6, 2015 at 11:33:56 AM EDT
> **To:** "Eisner, Jennifer (DHHS)" <EisnerJ@michigan.gov>
> **Cc:** "Lasher, Geralyn (DHHS)" <lasherg@michigan.gov>, "Hertel, Elizabeth (DHHS)" <HertelE@michigan.gov>, "Minicuci, Angela (DHHS)" <MinicuciA@michigan.gov>
> **Subject: Re: Flint Water Filters**
>
> Yes we are doing filter replacements. This is why we are verifying addresses and contact numbers in a database in addition to the types of water filters residents received.
>
> I'm on my way back to Lippincott right now.
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> Sheryl Thompson
> Deputy Director of Field Ops
> 517-241-5954
>
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> > > > **Subject: Flint Water Filters**
> > > >
> > > > Brad,

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Thanks.

Stephanie Parkinson
Anchor/Reporter
NBC25
Flint, Michigan

Newsroom: 810-687-9600
Twitter: StephaniePNews

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 06, 2015 2:50 PM
To: Wurfel, Brad (DEQ)
Subject: Re: Follow-up questions

Please make sure you have Dan available too. Key.

Sent from my iPhone

On Oct 6, 2015, at 2:47 PM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

> Nancy,
> Trying to reach you. I've got our division chief for a bit. Is this a workable time?
>
> Sent from my iPhone
>
> On Oct 6, 2015, at 1:43 PM, Kaffer, Nancy <nkaffer@freepress.com> wrote:
>
> > Hey guys – still looking for info
> >
> > Nancy Kaffer
> > Columnist
> > Detroit Free Press
> > www.freep.com/abettermichigan
> > 313-222-6585
> > @nancykaffer, @abettermi
> >
> > **From:** Kaffer, Nancy
> > **Sent:** Monday, October 05, 2015 2:49 PM
> > **To:** 'Wurfel, Sara (GOV)' <WurfelS@michigan.gov>; 'WurfelB@michigan.gov' <WurfelB@michigan.gov>
> > **Cc:** Wisely, John <jwisely@freepress.com>
> > **Subject:** FW: Follow-up questions
> > **Importance:** High
> >
> > Hi Sara – sent these last week and got no response. Figured some of these are MDEQ questions, so I'm adding Brad onto the list, here.
> >
> > ASAP would be great.
> >
> > Thanks!
> >
> > N
> >
> > Nancy Kaffer
> > Columnist
> > Detroit Free Press
> > www.freep.com/abettermichigan

313-222-6585
@nancykaffer, @abettermi

From: Kaffer, Nancy
Sent: Friday, October 02, 2015 12:06 PM
To: 'Wurfel, Sara (GOV)' <Wurfels@michigan.gov>
Subject: Follow-up questions
Importance: High

- Reviewing my notes, I'm not sure I got a definitive answer from Wyant about corrosion control at the Flint water treatment plant.
  Was corrosion control in use? I'd like a simple yes or no, here – if no, obviously, why not – if yes, what was it, and why was – if any – what sounds like a lesser degree of corrosion control being used? I would like the names of the specific technologies/chemicals that were in use in the past, if in fact corrosion control was being used at the Flint plant, and the specific technologies that will be used going forward.
- Was the MDEQ unaware that there were aging lead service lines in Flint, and that those would increase the lead risk? Were the Flint water treatment folks? Why was this not taken into account in developing the water treatment plan?
- Wyant said that "two consecutive back to back tests" showed there was a problem; when were those tests performed and when were the results available?

Obviously I would like to use this information in a piece we'll have ready to go at 1:30p so ASAP would be great.

Nancy Kaffer
Columnist
Detroit Free Press
www.freep.com/abettermichigan
313-222-6585
@nancykaffer, @abettermi

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 10:50 AM
To: Lasher, Geralyn (DHHS)
Subject: RE: I will be in Flint tomorrow

Got it, thanks much.

We'll just need to work through and coordinate on roles and remarks of Nick and Dr. Wells.

-----Original Message-----
From: Lasher, Geralyn (DHHS)
Sent: Wednesday, October 07, 2015 10:22 AM
To: Wyant, Dan (DEQ) <WyantD@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: FW: I will be in Flint tomorrow

FYI. Nick will be in Flint with you tomorrow.

-----Original Message-----
From: Lyon, Nick (DHHS)
Sent: Wednesday, October 07, 2015 9:31 AM
To: Becker, Timothy (DHHS) <beckert1@michigan.gov>; Grijalva, Nancy (DHHS) <GrijalvaN@michigan.gov>; Hertel, Elizabeth (DHHS) <HertelE@michigan.gov>; Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Eisner, Jennifer (DHHS) <EisnerJ@michigan.gov>; Eden Wells <ewells@umich.edu>; Moran, Susan (DHHS) <MoranS@michigan.gov>
Subject: I will be in Flint tomorrow

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 1:54 PM
To: 'Wurfel, Brad (DEQ)'
Cc: Shekter Smith, Liane (DEQ)
Subject: RE: two questions from Gov

Didn't you say something about past statute presumed that they had already switched from lead service lines?

What about a new school opening or changing hands? At beginning of each school year?

From: Wurfel, Brad (DEQ)
Sent: Wednesday, October 07, 2015 1:45 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Cc: Shekter Smith, Liane (DEQ) <SHEKTERL@michigan.gov>
Subject: RE: two questions from Gov

Liane, please correct me if I've got this wrong …

In short, I believe the answer I'm going to be able to confirm yet today is that the schools have never been tested.

There is no requirement in statute for the testing of schools for lead or copper if they're using the municipal service as their supply (statute presumes they are covered same as homes by the surveillance monitoring done on households).

If the school is on its own well, it undergoes testing as a sole source.
b

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 1:27 PM
To: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Subject: FW: two questions from Gov

#1 is the Q I asked about yesterday. The Governor is still very much expecting -- and we need -- an answer to this Q. (And what is requirement or statute, or standard, or isn't there one?)

Thanks!

From: Agen, Jarrod (GOV)
Sent: Wednesday, October 07, 2015 1:19 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: two questions from Gov

1) What is our Comms response to the question: What happens in rest of the state regarding water testing in schools?

2) Gov is meeting with SML and Speaker this afternoon, but when do we inform Ananich and Greimel? On this one, I assume we are inviting Ananich tomorrow morning and we can just tell Greimel at that same time, right? What time are we doing that?

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 3:32 PM
To: Biehl, Laura (GOV); Kennedy, Jordan (GOV); Agen, Jarrod (GOV); Murray, David (GOV); Heaton, Anna (GOV); Brown, Jessica (GOV)
Subject: RE: MA for review

Sigh of relief and good news on stream.

Also, Mott comms apparently said their building team recommended the name that appears on the outside of the building to help avoid confusion, which has a slightly revised address too.

Commerce Center/Mott Foundation Building - Conference Center, Ground Floor
519 S. Saginaw Street

We should add note about credentialed media as well.

From: Biehl, Laura (GOV)
Sent: Wednesday, October 07, 2015 3:18 PM
To: Kennedy, Jordan (GOV) <KennedyJ4@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Heaton, Anna (GOV) <HeatonA@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>
Subject: RE: MA for review

Erik said we should be good on livestream.

From: Kennedy, Jordan (GOV)
Sent: Wednesday, October 07, 2015 2:51 PM
To: Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Heaton, Anna (GOV) <HeatonA@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>
Subject: MA for review
Importance: High

Team—

Below is the media advisory for tomorrow. The Livestream portion is highlighted because we are still checking to make sure the venue has livestreaming capabilities.

Wednesday, Oct. 7, 2015
Contact: Sara Wurfel or Dave Murray
Office: 517-335-6397

Editor's note: Media must present valid press credentials on site.

Thursday, Oct. 8 at 10 a.m.
Gov. Rick Snyder will make an announcement regarding the Flint water system. He will be joined by Flint Mayor Dayne Walling, Director of Environmental Quality, Dan Wyant, Director of the Department of Health and Human Services, Nick Lyon, Dr. Eden Wells, Chief Medical Executive at DHHS, and Ridgway White of the Charles Stewart Mott Foundation.

A livestream option is also available at [redacted]. If you wish to embed the event please visit [redacted] for more information.

Location:
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503 S. Saginaw St.
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Thursday, Oct. 8 at 7 p.m.
Snyder will offer remarks at the Celebration of Life Gala supporting Magen David Adom (Israel's national 911 and emergency services).

Location:
Adat Shalom Synagogue
29901 Middlebelt Rd.
Farmington Hills, MI

#####

Jordan Kennedy
Communications Representative
Executive Office of Governor Rick Snyder
Phone: 517.335.6397

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 3:40 PM
To: Kennedy, Jordan (GOV)
Subject: RE: MA for review

You need to add in the credentialing information yet. thx

From: Kennedy, Jordan (GOV)
Sent: Wednesday, October 07, 2015 3:40 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Heaton, Anna (GOV) <HeatonA@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>
Cc: Paciorek, Josh (GOV) <Paciorekj@michigan.gov>
Subject: RE: MA for review

I updated the address below.

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Flint, MI

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Location:
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Farmington Hills, MI

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Communications Representative
Executive Office of Governor Rick Snyder
Phone: 517.335.6397

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 3:42 PM
To: Kennedy, Jordan (GOV)
Subject: RE: MA for review

And street address still needs to be amended too. See highlighted below. Just in case: 519 S. Saginaw St.

From: Wurfel, Sara (GOV)
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Subject: RE: MA for review

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[redacted]

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29901 Middlebelt Rd.
Farmington Hills, MI

#####

Jordan Kennedy
Communications Representative
Executive Office of Governor Rick Snyder
Phone: 517.335.6397

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 4:19 PM
To: 'Kathryn A. Thomas'
Subject: RE: Contact info
Attachments: FlintWater_PodiumSign.pdf

Got it – many thanks, Kathryn.

Also, here is what had mentioned about podium sign. Basic, to the point/message and no one entity as primary. Work and comfortable for that end?

We should indeed make sure there's security connections. Who is your point for that and contact info? I'm trying to verify who's going to be lead on our team's EP unit and will also share as soon as receive.

From: Kathryn A. Thomas [mailto:kthomas@mott.org]
Sent: Wednesday, October 07, 2015 1:27 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: Contact info

Brief correction for the address on the advisory. Our building manager advises that we should use the name that appears on the outside of the building so as to avoid confusion. She recommends the following:

Commerce Center Building
519 S. Saginaw Street
Conference Center, Ground Floor

I also wanted to ask if we should connect our building security staff with your security staff. Please let me know.

Thanks!

Kathryn

From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
Sent: Wednesday, October 7, 2015 12:41 PM
To: Kathryn A. Thomas <kthomas@mott.org>
Cc: Biehl, Laura (GOV) <BiehlL@michigan.gov>; Heaton, Anna (GOV) <HeatonA@michigan.gov>; Janiszewski, Erik (GOV) <JaniszewskiE@michigan.gov>; Utley, Corey (GOV) <UtleyC@michigan.gov>
Subject: RE: Contact info

Many thanks, Kathryn.

So appreciate your and the Mott Foundation's leadership and assist on this and helping make the Dining Room conference center space in the Mott Foundation Building available.

Here too is all my contact information, along with our team who will be working on this as well. Have cc'd them here as well.

We'll wait to hear from you on some of the outstanding technical and logistical Qs, and also be back in touch as we have drafts of materials hopefully late this afternoon.

Laura Biehl
[redacted] mobile
biehll@michigan.gov

Anna Heaton
[redacted] mobile
heatona@michigan.gov

Corey Utley (Advance Coordinator)
[redacted] mobile
utleyc@michigan.gov

Depending on any particulars, we also may need our livestream guru and videographer, Erik Janiszewski, to connect with your IS services team as well. His mobile is [redacted] and JaniszewskiE@michigan.gov.

Thanks again and warm regards,
SW

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

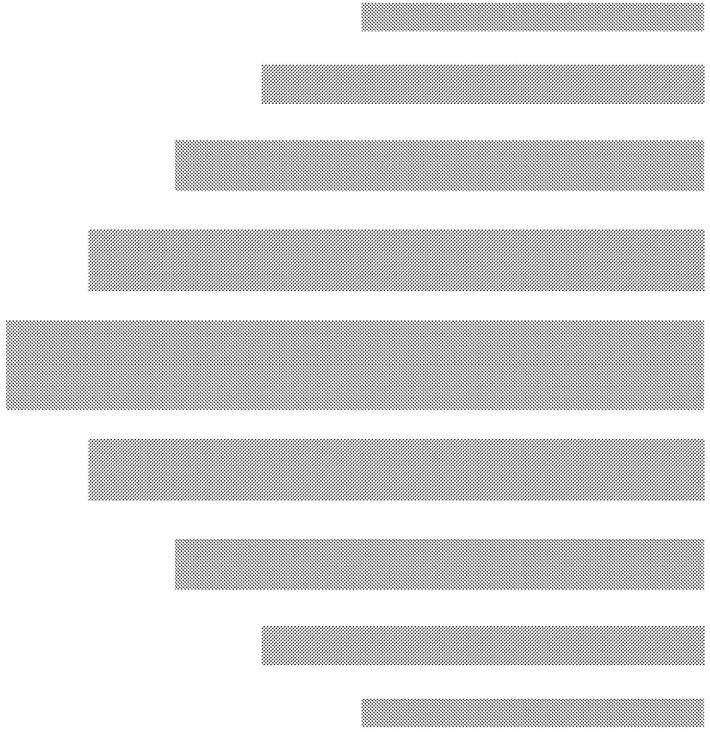
From: Kathryn A. Thomas [mailto:kthomas@mott.org]
Sent: Wednesday, October 07, 2015 12:18 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Contact info

Hi, Sara.

My direct office number and cell are both listed below. I am off in pursuit of answers to your immediate questions.

Best regards,
Kathryn

Kathryn Thomas
Vice President -- Communications
Charles Stewart Mott Foundation
503 S. Saginaw Street, Suite 1200
Flint, MI 48502-1851
office: 810-766-1734 | cell: [redacted]



TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 4:26 PM
To: 'Workman, Wayne (TREASURY)'
Subject: RE: flint docs

Thx.

Was there any vote at all from Flint City Council to use Flint water once DWSD sent that notice and city had to make determination in spring of 2014??

From: Workman, Wayne (TREASURY)
Sent: Wednesday, October 07, 2015 4:25 PM
To: Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Cc: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Stanton, Terry A. (Treasury) <StantonT@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Wurfel, Brad (DEQ) <Wurfelb@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>
Subject: FW: flint docs

Harvey, Attached are various documents and press reports of the City Council`s vote in March 2013 to join KWA. We have not located the actual resolution and it is not on the City`s website. It is interesting that the only no vote explained he wanted to just use Flint River water. Wayne

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Dempkowski, Angela (Treasury)
Sent: Wednesday, October 07, 2015 4:20 PM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Subject: flint docs

Revised pdf

Angela Dempkowski | Senior Executive Management Assistant/Treasury
State of Michigan | 430 W. Allegan Street, 1st Floor | Lansing, MI 48922
(517) 373-4415 | (517) 373-0633 (fax)
dempkowskia@michigan.gov

Think Green! Don't print this e-mail unless you need to.

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Thank you

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 6:20 PM
To: Monica Davey - NY Times; [redacted]
Subject: FW: Snyder Media Advisory for Thursday, Oct. 8

FYI

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Wednesday, October 07, 2015 6:13 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Snyder Media Advisory for Thursday, Oct. 8

Wednesday, Oct. 7, 2015
Contact: Sara Wurfel or Dave Murray
Office: 517-335-6397

Editor's Note: This advisory is for media planning purposes only and not for publication.

Thursday, Oct. 8 at 10 a.m.
Gov. Rick Snyder will make an announcement regarding the Flint water system. He will be joined by Flint Mayor Dayne Walling, Director of Environmental Quality, Dan Wyant, Director of the Department of Health and Human Services, Nick Lyon, Dr. Eden Wells, Chief Medical Executive at DHHS, and Ridgway White of the Charles Stewart Mott Foundation.

A livestream option is also available at www.michigan.gov/snyderlive. If you wish to embed the event please visit http://new.livestream.com/snyderlive for more information.

Media must present valid press credentials on site.

Location:
Mott Foundation/Commerce Center Building – Conference Center, Ground Floor
519 S. Saginaw St.
Flint, MI

Thursday, Oct. 8 at 7 p.m.
Snyder will offer remarks at the Celebration of Life Gala supporting Magen David Adom (Israel's

national 911 and emergency services).

Media must present valid press credentials on site.

Location:
Adat Shalom Synagogue
29901 Middlebelt Rd.
Farmington Hills, MI

#####

STAY CONNECTED:

This email was sent to wurfels@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 7:02 PM
To: 'Wisely, John'; Wurfel, Brad (DEQ)
Subject: RE: Flint funding question.

Importance: High

Hi there John -

What I'd say is that this is an option we're helping thoroughly review and consider with the city, and the technical advisory committee's work is much appreciated in this matter. We're also focused on working hard in collaboration with all and implementing the key action steps outlined on Oct. 2 to help protect public health and ensure safe, accessible drinking water for Flint residents.

We have slated a time tomorrow morning for the Governor and administration with city and community leaders to provide an update overall on Flint water so hoping you got those details. (Just let me know if you did not).

Thanks and best,
SW

-----Original Message-----
From: Wisely, John [mailto:jwisely@freepress.com]
Sent: Wednesday, October 07, 2015 5:27 PM
To: Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Flint funding question.

Sara and Brad:
You may have seen that the technical advisory committee today recommended that Flint reconnect to Detroit's water system.
Walling claims that will cost $12 million over nine months. He's asking the governor in the legislature to come up with the money.
Can we get a comment from the governor ASAP?
I'd appreciate it.
John

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 7:06 PM
To: 'Stephen Carmody'
Subject: RE: A news media question
Attachments: Snyder Media Advisory for Thursday, Oct. 8

The Governor and administration are planning an update on Flint water with city and community leaders tomorrow, Steve. The media advisory is attached just in case.

Thanks much and best regards,
SW

From: Stephen Carmody [mailto:sgcarmod@umich.edu]
Sent: Wednesday, October 07, 2015 6:52 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: A news media question

Sara,

Is there anything planned for tomorrow on Flint water?

Steve Carmody
Michigan Radio

From: GOV Newsroom <govnewsroom@govsubscriptions.michigan.gov>
Sent: Wednesday, October 07, 2015 6:13 PM
Subject: Snyder Media Advisory for Thursday, Oct. 8

Wednesday, Oct. 7, 2015
Contact: Sara Wurfel or Dave Murray
Office: 517-335-6397

Editor's Note: This advisory is for media planning purposes only and not for publication.

Thursday, Oct. 8 at 10 a.m.
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A livestream option is also available at www.michigan.gov/snyderlive. If you wish to embed the event please visit http://new.livestream.com/snyderlive for more information.

Media must present valid press credentials on site.

Location:
Mott Foundation/Commerce Center Building – Conference Center, Ground Floor
519 S. Saginaw St.
Flint, MI

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Snyder will offer remarks at the Celebration of Life Gala supporting Magen David Adom (Israel's national 911 and emergency services).

Media must present valid press credentials on site.

Location:
Adat Shalom Synagogue
29901 Middlebelt Rd.
Farmington Hills, MI

#####

STAY CONNECTED:

This email was sent to wurfeis@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 7:06 PM
To: 'Davey, Monica'
Subject: RE: FW: Snyder Media Advisory for Thursday, Oct. 8

You can say as early as Thursday. Would prefer that the other pieces not be used.

Thanks much,
SW

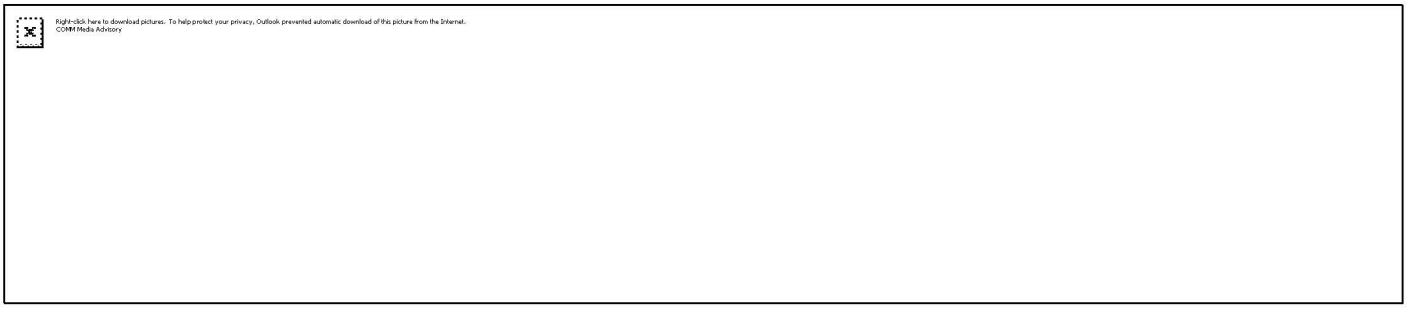
From: Davey, Monica [mailto:davey@nytimes.com]
Sent: Wednesday, October 07, 2015 6:27 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Re: FW: Snyder Media Advisory for Thursday, Oct. 8

Thank you.
Is there anything at all I can say beyond:

> Officials were meeting in Flint on Wednesday afternoon and talks were underway, officials said, for additional solutions that could be announced as early as this week.
>
> can I say as early as Thursday?
>
> Can I say that the governor has called a press conference for thursday?
>
> Anything at all?

On Wed, Oct 7, 2015 at 5:19 PM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:

> FYI
>
> ---
>
> **From:** GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
> **Sent:** Wednesday, October 07, 2015 6:13 PM
> **To:** Wurfel, Sara (GOV) <Wurfels@michigan.gov>
> **Subject:** Snyder Media Advisory for Thursday, Oct. 8



Wednesday, Oct. 7, 2015
Contact: Sara Wurfel or Dave Murray
Office: 517-335-6397

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Thursday, Oct. 8 at 10 a.m.
Gov. Rick Snyder will make an announcement regarding the Flint water system. He will be joined by Flint Mayor Dayne Walling, Director of Environmental Quality, Dan Wyant, Director of the Department of Health and Human Services, Nick Lyon, Dr. Eden Wells, Chief Medical Executive at DHHS, and Ridgway White of the Charles Stewart Mott Foundation.

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Media must present valid press credentials on site.

Location:
Adat Shalom Synagogue
29901 Middlebelt Rd.
Farmington Hills, MI

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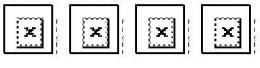
STAY CONNECTED:



This email was sent to wurfels@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 7:24 PM
To: 'Hicks, Mark'; Murray, David (GOV)
Subject: RE: Flint water committee

Hi there Mark –

Happy to help. What I'd say is that this is an option we're helping thoroughly review and consider with the city, and the technical advisory committee's work is much appreciated in this matter. We're also focused on working hard in collaboration with all and implementing the key action steps outlined on Oct. 2 to help protect public health and ensure safe, accessible drinking water for Flint residents.

As you noted, we have slated a time tomorrow morning for the Governor and administration with city and community leaders to provide an update on Flint water so hoping you got those details. Stay tuned.

Thanks and best,
SW

From: Hicks, Mark [mailto:MHicks@detroitnews.com]
Sent: Wednesday, October 07, 2015 7:08 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: Flint water committee

Hello. This is Mark Hicks, a reporter at The Detroit News. I am trying to reach representatives for Gov. Snyder's office tonight regarding a recommendation from a committee of experts on Wednesday to reconnect Flint to Detroit's water system to improve the drinking water quality. Has the governor's office received this recommendation, and does it impact the announcement tomorrow regarding Flint's water system?

Please feel free to let me know if you or another representative can reach me before 8:30 p.m. EST tonight for a brief phone interview or statement regarding this recommendation. I realize this is late and short notice after-hours, and some information might not be immediately accessible, but any help provided will be greatly appreciated and better inform our readers. Thank you for your time.

Mark Hicks
Reporter, The Detroit News
Phone: (313) 222-2117
E-mail: mhicks@detroitnews.com

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 7:40 PM
To: Ron Fonger - MLive/Flint Journal; 'racosta1@mlive.com'
Subject: Technical Advisory Committee, water switch & Q on tomorrow

Importance: High

Greetings, Ron and Roberto –

Sorry for delay. Been on conference calls and meetings until just now.

Happy to help. I think Dave got a chance to cover some of this with you already, but just in case.

This is an option that we're helping thoroughly review and consider with the city, and the technical advisory committee's work is much appreciated in this matter. We're also focused on working hard in collaboration with all and implementing the key action steps outlined on Oct. 2 to help protect public health and ensure safe, accessible drinking water for Flint residents.

As you noted, we have slated a time tomorrow morning for the Governor and administration with city and community leaders to provide an update on Flint water. Stay tuned.

Thanks so much and looking forward to seeing you tomorrow. Just let me know if there's something you may need in the interim.

Best regards,
SW

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 7:41 PM
To: 'Dayne Walling'
Subject: RE: City Council invites

Great – got them, thanks. Harvey will be reaching out.

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Wednesday, October 07, 2015 7:31 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Re: City Council invites

President Freeman [redacted]
VP Davis [redacted]
Mays [redacted]
Poplar [redacted]
Nelson [redacted]
Winfrey [redacted]
Galloway [redacted]
Van Buren [redacted]
Kincaid [redacted]

On Wed, Oct 7, 2015 at 6:47 PM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:

> Thanks, Mayor.
>
> We will happy to do so. Harvey Hollins make these invites asap and I'm sure he has some of the contact information, but if you could pass along all as soon as you get a chance, that'd be great and much appreciated.
>
> I will be sending you and Jason a draft run of show and release yet this evening for your review, edit and adding in a quote.
>
> Please let me know if there is anything else at all needed between now and then.
>
> Thanks again and will look forward to seeing you tomorrow morning,
>
> SW

Sara Wurfel, APR

Press Secretary | Executive Office of Governor Rick Snyder

wurfels@michigan.gov

517-335-6397, office

[redacted], mobile

Twitter:@SaraLW

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Wednesday, October 07, 2015 5:27 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: City Council invites

Sara, please invite all of the Flint city council members. I left you a voicemail on this same subject with more background. Call me if you need assistance with reaching them.

Thanks

--

Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

--

Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 7:49 PM
To: Weiss, Kurt (DTMB)
Subject: RE: Flint Water Summary for Governor

Thanks much, Kurt. Very helpful and appreciated!

See the number changed slightly again upward. Though supposed better to get right number high enough out of gate rather than have to come back again.

From: Weiss, Kurt (DTMB)
Sent: Wednesday, October 07, 2015 7:34 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Fwd: Flint Water Summary for Governor

FYI. Here's the latest.

Sent from my iPhone

Begin forwarded message:

> **From:** "Duncan, Nancy (DTMB)" <duncann1@michigan.gov>
> **Date:** October 7, 2015 at 6:17:23 PM EDT
> **To:** "Weiss, Kurt (DTMB)" <WeissK1@michigan.gov>
> **Subject: FW: Flint Water Summary for Governor**
>
> f.y.i.

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 7:53 PM
To: Mayor Dayne Walling - City of Flint; Jason Lorenz - City of Flint
Subject: FW: Draft run of show and release

Importance: High

Greetings Mayor and Jason –

Here is proposed run of show for tomorrow, along with the draft release. Again, per earlier conversations, highly confidential and not for sharing as dependent on final details getting worked out at tomorrow's 9 a.m. meeting.

On the release, please note in particular the placeholder for the Mayor's quote.

Please review and let us know of any edits or concerns you may have. We look forward to your feedback. If there's a chance you can get us the quote sometime yet this evening, that'd be fantastic.

Also, we'd like to put a city media contact here as well. Assuming that's Jason. Just wanted to verify which contact info should we use?

Thanks again. Glad to be working and collaborating with the city on this very challenging issue.

Best regards,
SW

Run of show & comment topics below:

9:45 AM – 10:00 AM Pre-Brief with all speakers
10:00 AM – 10:01 AM Harvey Hollins kicks off press conference; introduces Governor
10:01 AM – 10:05 AM Governor gives remarks
10:05 AM – 10:06 AM Harvey Hollins introduces Mayor Dayne Walling
10:06 AM – 10:10 AM Mayor Walling gives remarks
10:10 AM – 10:11 AM Harvey Hollins introduces DEQ Director Dan Wyant
10:11 AM – 10:15 AM Director Wyant gives remarks
10:15 AM – 10:16 AM Harvey Hollins introduces DHHS Director Nick Lyon
10:16 AM – 10:17 AM Director Nick Lyon introduces Dr. Eden Wells
10:17 AM – 10:20 AM Dr. Eden Wells remarks
10:20 AM – 10:21 AM Harvey Hollins introduces Ridgway White of Mott Foundation
10:21 AM – 10:25 AM Ridgway White gives remarks
10:25 AM – 10:35 AM Q&A from the podium
10:35 AM Event concludes; Governor departs

Nature of comments:
RDS – Collaboration led to solution, outline of solution
Mayor Walling – Importance of solution to Flint
Dan Wyant – Overview of steps on transition from Flint River to DWSD, school testing results
Nick Lyon – DHHS involvement
Dr. Eden Wells – Testing of water going forward, use of filters approved by NSF

Release:

Gov. Rick Snyder: Move back to Detroit water provides best protection for public health in Flint

State, Mott Foundation and city form partnership to fund switch

FLINT, Mich. – Flint families and children will be better protected by reconnecting with the Great Lakes Water Authority as the source of the city's drinking water, Gov. Rick Snyder said.

Snyder said Thursday that he will request the state Legislature to provide half, or $6 million, of the $12 million needed to reconnect with the authority. The Flint city government will provide $2 million and the Charles Stewart Mott Foundation will donate $4 million.

"All Flint residents need clean, safe drinking water," Snyder said. "The technical experts helping the city on its water advisory all agree this move back to the Great Lakes Water Authority provides the best public health protection for children and families. This effort today is the result of people coming together to solve a problem. I appreciate Detroit's willingness to reconnect with Flint, the Mott Foundation's generous donation, and the dedication of all parties to come together to protect Flint families and children."

The Michigan Departments of Environmental Quality and Health and Human Services today also committed an additional $3.5 million for water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

Flint city leaders requested the state's help to fund the reconnection after a Wednesday meeting of Flint's Technical Advisory Committee. Flint's move to the Great Lakes Water Authority is expected to cost about $1.3 million per month until the Karegnondi Water Authority is completed next summer.

INSERT MAYOR QUOTE HERE

The move to Detroit water, which is drawn from Lake Huron, carries many public health benefits. As large bodies of water, the Great Lakes are naturally prone to fewer problems from large rain events and other runoff issues that can be present in shallower rivers. Additionally, the Great Lakes Water Authority has already fully optimized its corrosion control, using phosphates to help coat the insides of pipes and prevent lead from leaching into the water.

However, reconnecting with the authority will not completely resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control. Additionally, some households in the city could experience lead in their drinking water until all lead pipes and plumbing are replaced.

INSERT MOTT FOUNDATION QUOTE HERE

To best protect public health, Snyder said state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure.

Free filters are available for current MDHHS clients at the 125 E. Union St. or 4809 Clio Road MDHHS office locations. For residents who are not currently enrolled in MDHHS assistance programs, free filters are available at the Genesee County Community Action Resource Department offices at 2727 Lippincott and 601 North Saginaw in Flint. Staff will be at all four locations from 9 a.m. to 4 p.m., Monday through Friday, to

distribute filters and assist residents who have questions about proper installation. At the Lippincott location only, extended hours will be offered this weekend, including until 7 p.m. on Thursday and Friday and from 10 a.m. to 2 p.m. on Saturday.

Other good practices for residents concerned about lead include turning on the cold water tap and running the water until it's as cold as it will go. Additionally, only use cold water for cooking, drinking and especially mixing baby formula.

School test results released; more investigation planned

The state today also released the first results from its lead screening program in schools and homes. Of 37 total samples taken at 13 buildings, four samples spread over three buildings exceeded the federal action level of 15 parts per billion.

However, this sampling provides only an initial screen, and the state is committing to further testing water and inspecting plumbing at these schools. Until testing is complete, schools are advised to continue using bottled water and filtration as a precaution to protect children.

In addition, free testing is still available for any other Flint school, including daycares and Head Starts. Free testing is also available for any Flint resident.

Additional information, including more detailed lead screening results, is available at www.michigan.gov/flintwater.

###

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 8:07 PM
To: GovCalendar
Subject: Accepted: RDS/DW - Meeting with Mayor Dayne Walling and Ridgeway White

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 8:07 PM
To: GovCalendar
Subject: Accepted: RDS - REMARKS (AHeaton) Press Conference Re: Flint Water

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 8:16 PM
To: 'Hicks, Mark'
Subject: RE: Flint water committee

If you word it like that – an announcement/update on the Flint water situation is expected tomorrow – that would be fine. Just can't have any details of location or specific topics mentioned.

From: Hicks, Mark [mailto:MHicks@detroitnews.com]
Sent: Wednesday, October 07, 2015 7:57 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: Flint water committee

Thanks for sending this so quickly. Just to follow up, based on the advisory sent: we cannot mention that an announcement on the water situation is expected tomorrow?

From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
Sent: Wednesday, October 07, 2015 7:24 PM
To: Hicks, Mark <MHicks@detroitnews.com>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: RE: Flint water committee

Hi there Mark –

Happy to help. What I'd say is that this is an option we're helping thoroughly review and consider with the city, and the technical advisory committee's work is much appreciated in this matter. We're also focused on working hard in collaboration with all and implementing the key action steps outlined on Oct. 2 to help protect public health and ensure safe, accessible drinking water for Flint residents.

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Thanks and best,
SW

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Sent: Wednesday, October 07, 2015 7:08 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
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Please feel free to let me know if you or another representative can reach me before 8:30 p.m. EST tonight for a brief phone interview or statement regarding this recommendation. I realize this is late and short notice after-hours, and

some information might not be immediately accessible, but any help provided will be greatly appreciated and better inform our readers. Thank you for your time.

Mark Hicks
Reporter, The Detroit News
Phone: (313) 222-2117
E-mail: mhicks@detroitnews.com

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 10:07 PM
To: Kathryn A. Thomas
Subject: Re: Draft release

How about you just call my cell ([redacted]) whenever you're ready and you'd like.

Sent from my iPhone

> On Oct 7, 2015, at 10:00 PM, Kathryn A. Thomas <[redacted] wrote:
>
> Sadly, I'm still in the office. ;) I need to send e-mail out, but could chat after that, if you like.
>
> -----Original Message-----
> From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
> Sent: Wednesday, October 7, 2015 9:59 PM
> To: Kathryn A. Thomas[redacted]
> Cc: Biehl, Laura (GOV) <BiehlL@michigan.gov>; Heaton, Anna (GOV) <HeatonA@michigan.gov>
> Subject: Re: Draft release
>
> Many thanks, Kathryn. I think we can concur with nearly all of these and agreed on clarification re: connection and timeframe. Headline will be a challenge since they also pull water from Detroit River. Will send updated version once we have other review and edits in.
>
> Would it be helpful / do you want to connect yet tonight? Will be more than happy to call if so. Otherwise don't want to bug you this late.
>
> Just let me know.
>
> SW
>
> Sent from my iPhone
>
> On Oct 7, 2015, at 9:41 PM, Kathryn A. Thomas[redacted] wrote:
>
> This version contains a quote from Ridgway. Do I understand correctly that you will not issue a release before 10 am?
>
> I will be leaving the office soon. Please feel free to call me on my mobile ([redacted]) at any time. I hope to be back here tomorrow before your team begins arriving.
>
> Best,
> Kathryn
>
> From: Kathryn A. Thomas
> Sent: Wednesday, October 7, 2015 8:23 PM
> To: 'Wurfel, Sara (GOV)' <Wurfels@michigan.gov<mailto:Wurfels@michigan.gov>>
> Cc: Biehl, Laura (GOV) <BiehlL@michigan.gov<mailto:BiehlL@michigan.gov>>; Heaton, Anna (GOV) <HeatonA@michigan.gov<mailto:HeatonA@michigan.gov>>

> Subject: RE: Draft release
> Importance: High
>
> Hi, Sara.
>
> I will work with Ridgway on a quote, but I wanted to get some initial comments back to you as quickly as possible. Please be sure to view markup to see the comments.
>
> I'm still in my office. Please call me there (810-766-1734) or on my mobile ([redacted]) if there's anything you wish to discuss.
>
> Kathryn
>
> From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
> Sent: Wednesday, October 7, 2015 7:22 PM
> To: Kathryn A. Thomas [redacted]
> Cc: Biehl, Laura (GOV) <BiehlL@michigan.gov<mailto:BiehlL@michigan.gov>>; Heaton, Anna (GOV) <HeatonA@michigan.gov<mailto:HeatonA@michigan.gov>>
> Subject: RE: Draft release
> Importance: High
>
> Greetings again, Kathryn -
>
> And here is the draft confidential news release with placeholders for the Mayor and Mr. White's quotes. Dependent on final details getting worked out at tomorrow's meeting.
>
> Please review and let us know of any edits or concerns you may have. We look forward to your feedback. If there's a chance you can get us the quote sometime yet this evening, that'd be fantastic.
>
> Also, we'd like to put a Mott Foundation media contact here as well. Would that be yourself? And which numbers/contact info should we use?
>
> Thanks again. We are very glad to be working with you on this.
>
> Best regards,
> SW
>
>
> Gov. Rick Snyder: Move back to Detroit water provides best protection for public health in Flint State, Mott Foundation and city form partnership to fund switch
>
> FLINT, Mich. - Flint families and children will be better protected by reconnecting with the Great Lakes Water Authority as the source of the city's drinking water, Gov. Rick Snyder said.
>
> Snyder said Thursday that he will request the state Legislature to provide half, or $6 million, of the $12 million needed to reconnect with the authority. The Flint city government will provide $2 million and the Charles Stewart Mott Foundation will donate $4 million.
>
> "All Flint residents need clean, safe drinking water," Snyder said. "The technical experts helping the city on its water advisory all agree this move back to the Great Lakes Water Authority provides the best public health protection for children and families. This effort today is the result of people coming together to solve a problem. I appreciate Detroit's

willingness to reconnect with Flint, the Mott Foundation's generous donation, and the dedication of all parties to come together to protect Flint families and children."
>
> The Michigan Departments of Environmental Quality and Health and Human Services today also committed an additional $3.5 million for water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.
>
> Flint city leaders requested the state's help to fund the reconnection after a Wednesday meeting of Flint's Technical Advisory Committee. Flint's move to the Great Lakes Water Authority is expected to cost about $1.3 million per month until the Karegnondi Water Authority is completed next summer.
>
> INSERT MAYOR QUOTE HERE
>
> The move to Detroit water, which is drawn from Lake Huron, carries many public health benefits. As large bodies of water, the Great Lakes are naturally prone to fewer problems from large rain events and other runoff issues that can be present in shallower rivers. Additionally, the Great Lakes Water Authority has already fully optimized its corrosion control, using phosphates to help coat the insides of pipes and prevent lead from leaching into the water.
>
> However, reconnecting with the authority will not completely resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control. Additionally, some households in the city could experience lead in their drinking water until all lead pipes and plumbing are replaced.
>
> INSERT MOTT FOUNDATION QUOTE HERE
>
> To best protect public health, Snyder said state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure.
>
> Free filters are available for current MDHHS clients at the 125 E. Union St. or 4809 Clio Road MDHHS office locations. For residents who are not currently enrolled in MDHHS assistance programs, free filters are available at the Genesee County Community Action Resource Department offices at 2727 Lippincott and 601 North Saginaw in Flint. Staff will be at all four locations from 9 a.m. to 4 p.m., Monday through Friday, to distribute filters and assist residents who have questions about proper installation. At the Lippincott location only, extended hours will be offered this weekend, including until 7 p.m. on Thursday and Friday and from 10 a.m. to 2 p.m. on Saturday.
>
> Other good practices<http://michigan.gov/documents/deq/FlintWater_Tips_100115_002_501845_7.pdf> for residents concerned about lead include turning on the cold water tap and running the water until it's as cold as it will go. Additionally, only use cold water for cooking, drinking and especially mixing baby formula.
>
> School test results released; more investigation planned The state today also released the first results from its lead screening program in schools and homes. Of 37 total samples taken at 13 buildings, four samples spread over three buildings exceeded the federal action level of 15 parts per billion.
>
> However, this sampling provides only an initial screen, and the state is committing to further testing water and inspecting plumbing at these schools. Until testing is complete, schools are advised to continue using bottled water and filtration as a precaution to protect children.
>
> In addition, free testing is still available for any other Flint school, including daycares and Head Starts. Free testing is also available for any Flint resident.
>

> Additional information, including more detailed lead screening results, is available at www.michigan.gov/flintwater<http://www.michigan.gov/flintwater>.
> ###
>
>
> From: Heaton, Anna (GOV)
> Sent: Wednesday, October 07, 2015 6:26 PM
> To: 'Kathryn A. Thomas'[redacted]
> Cc: Wurfel, Sara (GOV) <Wurfels@michigan.gov<mailto:Wurfels@michigan.gov>>
> Subject: RE: security contact
>
> Thanks so much, Kathryn. Sorry to bother you so late.
>
> Run of show & comment topics below:
>
>
>
> 9:45 AM - 10:00 AM Pre-Brief with all speakers
>
> 10:00 AM - 10:01 AM Harvey Hollins kicks off press conference; introduces Governor
>
> 10:01 AM - 10:05 AM Governor gives remarks
>
> 10:05 AM - 10:06 AM Harvey Hollins introduces Mayor Dayne Walling
>
> 10:06 AM - 10:10 AM Mayor Walling gives remarks
>
> 10:10 AM - 10:11 AM Harvey Hollins introduces DEQ Director Dan Wyant
>
> 10:11 AM - 10:15 AM Director Wyant gives remarks
>
> 10:15 AM - 10:16 AM Harvey Hollins introduces DHHS Director Nick Lyon
>
> 10:16 AM - 10:17 AM Director Nick Lyon introduces Dr. Eden Wells
>
> 10:17 AM - 10:20 AM Dr. Eden Wells remarks
>
> 10:20 AM - 10:21 AM Harvey Hollins introduces Ridgway White of Mott Foundation
>
> 10:21 AM - 10:25 AM Ridgway White gives remarks
>
> 10:25 AM - 10:35 AM Q&A from the podium
>
> 10:35 AM Event concludes; Governor departs
>
>
>
> Nature of comments:
>
> RDS - Collaboration led to solution, outline of solution
>
> Mayor Walling - Importance of solution to Flint

>
> Dan Wyant - School testing results, overview of steps on transition from Flint River to DWSD
>
> Nick Lyon - DHHS involvement
>
> Dr. Eden Wells - Testing of water going forward, use of filters approved by NSF
>
> Ridgway White - Importance of collaboration/commitment to Flint
>
> From: Kathryn A. Thomas [redacted]
> Sent: Wednesday, October 07, 2015 6:20 PM
> To: Heaton, Anna (GOV) <HeatonA@michigan.gov<mailto:HeatonA@michigan.gov>>
> Subject: security contact
>
> Highlighted below.
>
> From: Kathryn A. Thomas
> Sent: Wednesday, October 7, 2015 4:32 PM
> To: 'Wurfel, Sara (GOV)' <Wurfels@michigan.gov<mailto:Wurfels@michigan.gov>>
> Subject: RE: Contact info
>
> Would you mind if we were to have a Mott logo on the podium? It will be our only visual representation. If it's a problem, let me know.
>
> Our head of security is Phil Snyder. (I never thought to ask if there's any relation!) His cell phone # is [redacted].
>
> The main security number at our front desk is 810-767-5052. That will get you to one of whichever two guards are on duty at the desk.
>
> The governor can park in the loading zone immediately along the back of our building. Our security staff will be watching for him and can let him in through the back door of the building. How many other vehicles will you need parking for?
>
> I want to get this info off to you, but I am about to follow up with another e-mail. Stay tuned.
>
>
>
>
>
> From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
> Sent: Wednesday, October 7, 2015 4:19 PM
> To: Kathryn A. Thomas [redacted]
> Subject: RE: Contact info
>
> Got it - many thanks, Kathryn.
>
> Also, here is what had mentioned about podium sign. Basic, to the point/message and no one entity as primary. Work and comfortable for that end?
>
> We should indeed make sure there's security connections. Who is your point for that and contact info? I'm trying to verify who's going to be lead on our team's EP unit and will also share as soon as receive.
>

> From: Kathryn A. Thomas [redacted]
> Sent: Wednesday, October 07, 2015 1:27 PM
> To: Wurfel, Sara (GOV) <Wurfels@michigan.gov<mailto:Wurfels@michigan.gov>>
> Subject: RE: Contact info
>
> Brief correction for the address on the advisory. Our building manager advises that we should use the name that appears on the outside of the building so as to avoid confusion. She recommends the following:
>
> Commerce Center Building
> 519 S. Saginaw Street
> Conference Center, Ground Floor
>
> I also wanted to ask if we should connect our building security staff with your security staff. Please let me know.
>
> Thanks!
>
> Kathryn
>
> From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
> Sent: Wednesday, October 7, 2015 12:41 PM
> To: Kathryn A. Thomas [redacted]
> Cc: Biehl, Laura (GOV) <BiehlL@michigan.gov<mailto:BiehlL@michigan.gov>>; Heaton, Anna (GOV) <HeatonA@michigan.gov<mailto:HeatonA@michigan.gov>>; Janiszewski, Erik (GOV) <JaniszewskiE@michigan.gov<mailto:JaniszewskiE@michigan.gov>>; Utley, Corey (GOV) <UtleyC@michigan.gov<mailto:UtleyC@michigan.gov>>
> Subject: RE: Contact info
>
> Many thanks, Kathryn.
>
> So appreciate your and the Mott Foundation's leadership and assist on this and helping make the Dining Room conference center space in the Mott Foundation Building available.
>
> Here too is all my contact information, along with our team who will be working on this as well. Have cc'd them here as well.
>
> We'll wait to hear from you on some of the outstanding technical and logistical Qs, and also be back in touch as we have drafts of materials hopefully late this afternoon.
>
> Laura Biehl
> [redacted] mobile
> biehll@michigan.gov<mailto:biehll@michigan.gov>
>
> Anna Heaton
> [redacted] mobile
> heatona@michigan.gov<mailto:heatona@michigan.gov>
>
> Corey Utley (Advance Coordinator)
> [redacted] mobile
> utleyc@michigan.gov<mailto:utleyc@michigan.gov>
>

> Depending on any particulars, we also may need our livestream guru and videographer, Erik Janiszewski, to connect with your IS services team as well. His mobile is [redacted] and JaniszewskiE@michigan.gov<mailto:JaniszewskiE@michigan.gov>.
>
> Thanks again and warm regards,
> SW
>
> Sara Wurfel, APR
> Press Secretary | Executive Office of Governor Rick Snyder wurfels@michigan.gov<mailto:wurfels@michigan.gov>
> 517-335-6397, office
> [redacted] mobile
> Twitter:@SaraLW
>
>
>
> From: Kathryn A. Thomas [redacted]
> Sent: Wednesday, October 07, 2015 12:18 PM
> To: Wurfel, Sara (GOV) <Wurfels@michigan.gov<mailto:Wurfels@michigan.gov>>
> Subject: Contact info
>
> Hi, Sara.
>
> My direct office number and cell are both listed below. I am off in pursuit of answers to your immediate questions.
>
> Best regards,
> Kathryn
>
> Kathryn Thomas
> Vice President - Communications
> Charles Stewart Mott Foundation
> 503 S. Saginaw Street, Suite 1200
> Flint, MI 48502-1851
> office: 810-766-1734 | cell: [redacted]
>
> <Draft release_Mott comments and RHW quote.docx>

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 11:44 PM
To: 'Kathryn A. Thomas'
Subject: FW: Updated news release

Importance: High

Greetings Kathryn –

Per our conversation just a bit ago, below is latest version of release that works to incorporate and marry all of yours and the city's comments, along with others. Believe we got most addressed.

We opted to keep a few things for flow.

Please review and make sure all good from your end.

We can do any final, major tweaks in the morning.

Also, here are a couple of pieces from DWSD/GLWA that show how the system pulls its water from both Lake Huron AND the Detroit River.

Water 101/Q&A about Water Treatment - http://www.dwsd.org/pages_n/water101.html
Q: What is the source my drinking water?
A: The Detroit Water and Sewerage Department gets all of its water from the Detroit River and Lake Huron.

Detroit Water & Sewerage Dept Fact Sheet –
http://www.dwsd.org/downloads_n/about_dwsd/fact_sheet/dwsd_fact_sheet.pdf
The water system draws fresh water from the Great Lakes System, with Lake Huron to the north and the Detroit River to the south.

Holler if anything else needed at all between now and tomorrow morning. See you soon and thanks for all your help!

SW

Gov. Rick Snyder: Move back to Detroit water provides best protection for public health in Flint

State, Mott Foundation, city form partnership to fund switch until KWA is ready

FLINT, Mich. – Flint families and children will be better protected by reconnecting with the Great Lakes Water Authority as the source of the city's drinking water until the Karegnondi Water Authority pipeline is completed, Gov. Rick Snyder said.

Snyder said Thursday that he will request the state Legislature to provide half, or $6 million, of the $12 million needed to reconnect with the authority through next summer, when the KWA is expected to be completed.

The Flint city government will provide $2 million and the Charles Stewart Mott Foundation has committed $4 million.

“All Flint residents need clean, safe drinking water,” Snyder said. “The technical experts helping the city on its water advisory all agree this move back to the Great Lakes Water Authority provides the best public health protection for children and families. This effort today is the result of people coming together to solve a problem. I appreciate Detroit’s willingness to reconnect with Flint, the Mott Foundation’s generous commitment, and the dedication of all parties to come together to protect Flint families and children.”

Flint city leaders requested the state’s help to fund the reconnection and to assist with health and infrastructure issues. Flint’s move to the Great Lakes Water Authority is expected to cost about $1.3 million per month until the Karegnondi Water Authority is completed next summer.

“It’s heartening to know so many people are working at so many levels to bring safe, clean water back to Flint,” Mott Foundation President Ridgway White said. “We believe that reconnecting the city’s water supply to Lake Huron is the right and necessary thing to do, and we’re glad we could help the state and the city make it happen.”

The move to Detroit water is expected to carry public health benefits. As large bodies of water, the Great Lakes are naturally prone to fewer problems from large rain events and other runoff issues that can sometimes be present in shallower rivers. Additionally, the Great Lakes Water Authority water already has additional corrosion control, using phosphates to help coat the insides of pipes and limit lead from leaching into the water.

However, reconnecting with the authority will not completely resolve the city’s problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control. Additionally, some households in the city could experience lead in their drinking water until all lead pipes and plumbing are replaced.

"Reconnecting to Detroit is the fastest way to deliver clean, safe water to Flint and stabilize the infrastructure system,” Flint Mayor Dayne Walling said. “I appreciate the state, the Mott Foundation, Detroit, and the county's participation in a solution for Flint's water problems. The health and safety of Flint's families, children and seniors is my top priority and reconnecting to Detroit is a major step that the city could not take alone given budget constraints."

To best protect public health, Snyder said state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure. The Michigan Departments of Environmental Quality and Health and Human Services today also committed an additional $3.5 million for water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

Free filters are available for current MDHHS clients at the 125 E. Union St. or 4809 Clio Road MDHHS office locations. For residents who are not currently enrolled in MDHHS assistance programs, free filters are available at the Genesee County Community Action Resource Department offices at 2727 Lippincott and 601 North Saginaw in Flint. Staff will be at all four locations from 9 a.m. to 4 p.m., Monday through Friday, to distribute filters and assist residents who have questions about proper installation. At the Lippincott location

only, extended hours will be offered this weekend, including until 7 p.m. on Thursday and Friday and from 10 a.m. to 2 p.m. on Saturday.

Other good practices for residents concerned about lead include turning on the cold water tap and running the water until it's as cold as it will go. Additionally, only use cold water for cooking, drinking and especially mixing baby formula.

School test results released; more investigation planned

The state today also released the first results from its lead screening program in schools and homes. Of 37 total samples taken at 13 buildings, four samples spread over three buildings exceeded the federal action level of 15 parts per billion.

However, this sampling provides only an initial screen, and the state is committing to further testing water and inspecting plumbing at these schools. Until testing is complete, schools are advised to continue using bottled water and filtration as a precaution to protect children.

In addition, free testing is still available for any other Flint school, including daycares and Head Starts. Free testing is also available for any Flint resident.

Additional information, including more detailed lead screening results, is available at www.michigan.gov/flintwater.

###

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 07, 2015 11:56 PM
To: 'Jason Lorenz'; Dayne Walling
Subject: RE: FW: Draft run of show and release

Thanks much to you both.

Below is latest version of release that works to incorporate and marry all of yours and Mott's comments, along with others. Believe we got all addressed.

Please review and make sure all good from your end.

We can do any final, major tweaks in the morning.

Holler if anything else needed at all between now and tomorrow morning. See you soon and thanks for all your help!

SW

Gov. Rick Snyder: Move back to Detroit water provides best protection for public health in Flint

State, Mott Foundation, city form partnership to fund switch until KWA is ready

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Snyder said Thursday that he will request the state Legislature to provide half, or $6 million, of the $12 million needed to reconnect with the authority through next summer, when the KWA is expected to be completed. The Flint city government will provide $2 million and the Charles Stewart Mott Foundation has committed $4 million.

"All Flint residents need clean, safe drinking water," Snyder said. "The technical experts helping the city on its water advisory all agree this move back to the Great Lakes Water Authority provides the best public health protection for children and families. This effort today is the result of people coming together to solve a problem. I appreciate Detroit's willingness to reconnect with Flint, the Mott Foundation's generous commitment, and the dedication of all parties to come together to protect Flint families and children."

Flint city leaders requested the state's help to fund the reconnection and to assist with health and infrastructure issues. Flint's move to the Great Lakes Water Authority is expected to cost about $1.3 million per month until the Karegnondi Water Authority is completed next summer.

"It's heartening to know so many people are working at so many levels to bring safe, clean water back to Flint," Mott Foundation President Ridgway White said. "We believe that reconnecting the city's water supply is the right and necessary thing to do, and we're glad we could help the state and the city make it happen."

The move to Detroit water is expected to carry public health benefits. As large bodies of water, the Great Lakes are naturally prone to fewer problems from large rain events and other runoff issues that can sometimes be present in shallower rivers. Additionally, the Great Lakes Water Authority water already has additional corrosion control, using phosphates to help coat the insides of pipes and limit lead from leaching into the water.

However, reconnecting with the authority will not completely resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control. Additionally, some households in the city could experience lead in their drinking water until all lead pipes and plumbing are replaced.

"Reconnecting to Detroit is the fastest way to deliver clean, safe water to Flint and stabilize the infrastructure system," Flint Mayor Dayne Walling said. "I appreciate the state, the Mott Foundation, Detroit, and the county's participation in a solution for Flint's water problems. The health and safety of Flint's families, children and seniors is my top priority and reconnecting to Detroit is a major step that the city could not take alone given budget constraints."

To best protect public health, Snyder said state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure. The Michigan Departments of Environmental Quality and Health and Human Services today also committed an additional $3.5 million for water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

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Additional information, including more detailed lead screening results, is available at www.michigan.gov/flintwater.

###

From: Jason Lorenz [mailto:jlorenz@cityofflint.com]
Sent: Wednesday, October 07, 2015 11:34 PM
To: Dayne Walling <dwalling@cityofflint.com>
Cc: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Re: FW: Draft run of show and release

Looks great, Sara. Tomorrow will surely be interesting.

On Oct 7, 2015 9:43 PM, "Dayne Walling" <dwalling@cityofflint.com> wrote:

> Thank you. Please do use Jason as the City public information officer and press contact. Release looks great!
>
> Couple things and my quote
>
> This sentence is not accurate: Flint city leaders requested the state's help to fund the reconnection after a Wednesday meeting of Flint's Technical Advisory Committee.
>
> I made my request to the Governor and COS on 10/2 and the Governor asked me about a funding arrangement prior to the advisory committee meeting.
>
> I think you could use a more general line such as: Flint city leaders requested the state's help to fund the reconnection and to assist with health and infrastructure issues.
>
> Then my quote:
> "Reconnecting to Detroit is the fastest way to deliver clean, safe water to Flint and stabilize the infrastructure system. I appreciate the State, the Mott Foundation, Detroit, and the County's participation in a solution for Flint's water problems. The health and safety of Flint's families, children and seniors is my top priority and reconnecting to Detroit is a major step that the City could not take alone given budget constraints."
>
> Finally, I have heard debate among the technical staff about the term optimized corrosion control. In particular, I understand that optimization actually takes place over time and Flint's system may not be optimized with the dosage of phosphate based corrosion control currently in the Detroit system, which is at a maintenance level.
> INstead of: Additionally, the Great Lakes Water Authority has already fully optimized its corrosion control
> Could say: Additionally, the Great Lakes Water Authority water already has additional corrosion control
>
> Nice working with you too and see you tomorrow
> Dayne

On Wed, Oct 7, 2015 at 7:53 PM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:

> Greetings Mayor and Jason –

Here is proposed run of show for tomorrow, along with the draft release. Again, per earlier conversations, highly confidential and not for sharing as dependent on final details getting worked out at tomorrow's 9 a.m. meeting.

On the release, please note in particular the placeholder for the Mayor's quote.

Please review and let us know of any edits or concerns you may have. We look forward to your feedback. If there's a chance you can get us the quote sometime yet this evening, that'd be fantastic.

Also, we'd like to put a city media contact here as well. Assuming that's Jason. Just wanted to verify which contact info should we use?

Thanks again. Glad to be working and collaborating with the city on this very challenging issue.

Best regards,

SW

Run of show & comment topics below:

9:45 AM – 10:00 AM Pre-Brief with all speakers

10:00 AM – 10:01 AM Harvey Hollins kicks off press conference; introduces Governor

10:01 AM – 10:05 AM Governor gives remarks

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10:17 AM – 10:20 AM Dr. Eden Wells remarks

10:20 AM – 10:21 AM Harvey Hollins introduces Ridgway White of Mott Foundation

10:21 AM – 10:25 AM Ridgway White gives remarks

10:25 AM – 10:35 AM Q&A from the podium

10:35 AM Event concludes; Governor departs

Nature of comments:

RDS – Collaboration led to solution, outline of solution

Mayor Walling – Importance of solution to Flint

Dan Wyant – Overview of steps on transition from Flint River to DWSD, school testing results

Nick Lyon – DHHS involvement

Dr. Eden Wells – Testing of water going forward, use of filters approved by NSF

Ridgway White – Importance of collaboration/commitment to Flint

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Release:

Gov. Rick Snyder: Move back to Detroit water provides best protection for public health in Flint

State, Mott Foundation and city form partnership to fund switch

FLINT, Mich. – Flint families and children will be better protected by reconnecting with the Great Lakes Water Authority as the source of the city's drinking water, Gov. Rick Snyder said.

Snyder said Thursday that he will request the state Legislature to provide half, or $6 million, of the $12 million needed to reconnect with the authority. The Flint city government will provide $2 million and the Charles Stewart Mott Foundation will donate $4 million.

"All Flint residents need clean, safe drinking water," Snyder said. "The technical experts helping the city on its water advisory all agree this move back to the Great Lakes Water Authority provides the best public health protection for children and families. This effort today is the result of people coming together to solve a problem. I appreciate Detroit's willingness to reconnect with Flint, the Mott Foundation's generous donation, and the dedication of all parties to come together to protect Flint families and children."

The Michigan Departments of Environmental Quality and Health and Human Services today also committed an additional $3.5 million for water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

Flint city leaders requested the state's help to fund the reconnection after a Wednesday meeting of Flint's Technical Advisory Committee. Flint's move to the Great Lakes Water Authority is expected to cost about $1.3 million per month until the Karegnondi Water Authority is completed next summer.

INSERT MAYOR QUOTE HERE

The move to Detroit water, which is drawn from Lake Huron, carries many public health benefits. As large bodies of water, the Great Lakes are naturally prone to fewer problems from large rain events and other runoff issues that can be present in shallower rivers. Additionally, the Great Lakes Water Authority has already fully optimized its corrosion control, using phosphates to help coat the insides of pipes and prevent lead from leaching into the water.

However, reconnecting with the authority will not completely resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control. Additionally, some households in the city could experience lead in their drinking water until all lead pipes and plumbing are replaced.

INSERT MOTT FOUNDATION QUOTE HERE

To best protect public health, Snyder said state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure.

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Additional information, including more detailed lead screening results, is available at www.michigan.gov/flintwater.

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Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 12:09 AM
To: Heaton, Anna (GOV)
Subject: Jason Lorenz - City of Flint
Attachments: Jason Lorenz - City of Flint.vcf; ATT00001.txt

Full Name:	Jason Lorenz - City of Flint
Last Name:	City of Flint
First Name:	Jason
Job Title:	Public Information Officer
Company:	City of Flint
Business:	(810) 237-2039
Mobile:	[redacted]
Primary Phone:	(810) 237-2039
E-mail:	jlorenz@cityofflint.com
E-mail Display As:	Jason Lorenz - City of Flint (jlorenz@cityofflint.com)

Sent from my iPad

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 9:28 AM
To: Kathryn Thomas - Mott Foundation
Subject: Fwd: FINAL Flint water press release with edits incorporated
Attachments: 151008 Flint water release_FINAL.docx; ATT00001.htm

Sent from my iPhone

Begin forwarded message:

> **From:** "Biehl, Laura (GOV)" <BiehlL@michigan.gov>
> **Date:** October 8, 2015 at 9:17:35 AM EDT
> **To:** "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>, "Murray, David (GOV)" <MurrayD1@michigan.gov>, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>, "Tommasulo, Karen (DEQ)" <TommasuloK@michigan.gov>, "Lasher, Geralyn (DHHS)" <lasherg@michigan.gov>, "Eisner, Jennifer (DHHS)" <EisnerJ@michigan.gov>, "Minicuci, Angela (DHHS)" <MinicuciA@michigan.gov>, "Weiss, Kurt (DTMB)" <WeissK1@michigan.gov>, "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Paciorek, Josh (GOV)" <Paciorekj@michigan.gov>
> **Subject: FINAL Flint water press release with edits incorporated**
>
> See attached.
>
> Laura Biehl
> Communications Manager
> Executive Office of Michigan Gov. Rick Snyder
> George W. Romney Building
> 111 S. Capitol Ave.
> Lansing, MI 48933
> Office: (517) 335-6397
> Cell: [redacted] *new number
> BiehlL@Michigan.gov

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray Governor's Office: 517-335-6397 Brad Wurfel, 517-284-6713 Department of Environmental Quality Jennifer Eisner, 517-230-9804 Department of Health and Human Services Kathryn Thomas, 810-766-1734 Mott Foundation Jason Lorenz, 810-237-2039 City of Flint	Thursday, Oct. 8, 2015

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State, city, Mott Foundation, join to fund switch until KWA is ready

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Snyder said Thursday that he will request the state Legislature to provide half, or $6 million, of the $12 million needed to reconnect with the authority through next summer, when the KWA is expected to be completed. The Flint city government will provide $2 million and the Charles Stewart Mott Foundation has committed $4 million.

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However, reconnecting with the authority will not completely resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control. Additionally, some households in the city could experience lead in their drinking water until all lead pipes and plumbing are replaced.

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From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 9:43 AM
To: David Eggert - AP; Mike Householder - AP
Subject: EMBARGOED info - Flint water

Importance: High

FULLY EMBARGOED until press conference starts.

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray Governor's Office: 517-335-6397 Brad Wurfel, 517-284-6713 Department of Environmental Quality Jennifer Eisner, 517-230-9804 Department of Health and Human Services Kathryn Thomas, 810-766-1734 Mott Foundation Jason Lorenz, 810-237-2039 City of Flint	Thursday, Oct. 8, 2015

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###

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov

517-335-6397, office
[redacted], mobile
Twitter:@SaraLW

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 9:49 AM
To: John Roach - Mayor Duggan Office
Subject: Final Flint water release
Attachments: 151008 Flint water release_FINAL.docx

Importance: High

John –

Thanks for your call. Rich connected with Gary, yes?

All good?

Please just let me know if any last issues, concerns or Qs.

Thanks and best,
SW

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
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LANSING

BRIAN CALLEY
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###

Sara Wurfel, APR
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517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

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STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 10:22 AM
To: Ackley, Martin (MDE)
Cc: Murray, David (GOV)
Subject: Fwd: Final Flint water release
Attachments: image001.png; ATT00001.htm; 151008 Flint water release_FINAL.docx; ATT00002.htm

Here it is Marty. Going on now at Michigan.gov/snyderlive

Sent from my iPhone

Begin forwarded message:

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

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"Reconnecting to Detroit is the fastest way to deliver clean, safe water to Flint and stabilize the infrastructure system," Flint Mayor Dayne Walling said. "I appreciate the state, the Mott Foundation, Detroit, and the county's participation in a solution for Flint's water problems. The health and safety of Flint's families, children and seniors is my top priority, and reconnecting to Detroit is a major step that the city could not take alone given budget constraints."

To best protect public health, Snyder said state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure. The Michigan Departments of Environmental Quality and Health and Human Services today also committed an additional $3.5 million for water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

Free filters are available for current MDHHS clients at the 125 E. Union St. or 4809 Clio Road MDHHS office locations. For residents who are not currently enrolled in MDHHS assistance programs, free filters are available at the Genesee County Community Action Resource Department offices at 2727 Lippincott and 601 North Saginaw in Flint. Staff will be at all four locations from 9 a.m. to 4 p.m., Monday through Friday, to distribute filters and assist residents who have questions about proper installation. At the Lippincott location only, extended hours will be offered this weekend, including until 7 p.m. on Thursday and Friday and from 10 a.m. to 2 p.m. on Saturday.

Other good practices for residents concerned about lead include turning on the cold water tap and running the water until it's as cold as it will go. Additionally, only use cold water for cooking, drinking and especially mixing baby formula.

School test results released; more investigation planned

The state today also released the first results from its lead screening program in schools and homes. Of 37 total samples taken at 13 buildings, four samples spread over three buildings exceeded the federal action level of 15 parts per billion.

However, this sampling provides only an initial screen, and the state is committing to further testing water and inspecting plumbing at these schools. Until testing is complete, schools are advised to continue using bottled water and filtration as a precaution to protect children.

In addition, free testing is still available for any other Flint school, including daycares and Head Starts. Free testing is also available for any Flint resident.

Additional information, including more detailed lead screening results, is available at www.michigan.gov/flintwater.

###

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 10:23 AM
To: Serena Maria Daniels
Subject: Fwd: Final Flint water release
Attachments: image001.png; ATT00001.htm; 151008 Flint water release_FINAL.docx; ATT00002.htm

Per request

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

Begin forwarded message:

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray Governor's Office: 517-335-6397 Brad Wurfel, 517-284-6713 Department of Environmental Quality Jennifer Eisner, 517-230-9804 Department of Health and Human Services Kathryn Thomas, 810-766-1734 Mott Foundation Jason Lorenz, 810-237-2039 City of Flint	Thursday, Oct. 8, 2015

Gov. Rick Snyder: Move back to Detroit water provides best protection for public health in Flint

State, city, Mott Foundation, join to fund switch until KWA is ready

FLINT, Mich. – Flint families and children will be better protected by reconnecting with the Great Lakes Water Authority as the source of the city's drinking water until the Karegnondi Water Authority pipeline is completed, Gov. Rick Snyder said.

Snyder said Thursday that he will request the state Legislature to provide half, or $6 million, of the $12 million needed to reconnect with the authority through next summer, when the KWA is expected to be completed. The Flint city government will provide $2 million and the Charles Stewart Mott Foundation has committed $4 million.

"All Flint residents need clean, safe drinking water," Snyder said. "The technical experts helping the city on its water advisory all agree this move back to the Great Lakes Water Authority provides the best public health protection for children and families. This effort today is the result of people coming together to solve a problem. I appreciate Detroit's willingness to reconnect with Flint, the Mott Foundation's generous commitment, and the dedication of all parties to come together to protect Flint families and children."

Flint city leaders requested the state's help to fund the reconnection and to assist with health and infrastructure issues. Flint's move to the Great Lakes Water Authority is expected to cost about $1.3 million per month until the Karegnondi Water Authority is completed next summer.

"It's heartening to know so many people are working at so many levels to bring safe, clean water back to Flint," Mott Foundation President Ridgway White said. "We believe this transitional solution is the right and necessary thing to do, and we're glad we could help the state and the city make it happen."

The move to Detroit water, which is expected to carry, carries many public health benefits. As large bodies of water, the Great Lakes are naturally prone to fewer problems from large rain events and other runoff issues that can sometimes be present in shallower rivers. Additionally, the Great Lakes Water Authority water already has additional corrosion control, using phosphates to help coat the insides of pipes and limit lead from leaching into the water.

However, reconnecting with the authority will not completely resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control. Additionally, some households in the city could experience lead in their drinking water until all lead pipes and plumbing are replaced.

"Reconnecting to Detroit is the fastest way to deliver clean, safe water to Flint and stabilize the infrastructure system," Flint Mayor Dayne Walling said. "I appreciate the state, the Mott Foundation, Detroit, and the county's participation in a solution for Flint's water problems. The health and safety of Flint's families, children and seniors is my top priority, and reconnecting to Detroit is a major step that the city could not take alone given budget constraints."

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However, this sampling provides only an initial screen, and the state is committing to further testing water and inspecting plumbing at these schools. Until testing is complete, schools are advised to continue using bottled water and filtration as a precaution to protect children.

In addition, free testing is still available for any other Flint school, including daycares and Head Starts. Free testing is also available for any Flint resident.

Additional information, including more detailed lead screening results, is available at www.michigan.gov/flintwater.

###

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 1:28 PM
To: 'Serena Maria Daniels'
Subject: RE: Flint water press release?

You got OK earlier, yes?

Wil have our team double check that again and make sure we get distribution issues resolved.

From: Serena Maria Daniels [mailto:[redacted]
Sent: Thursday, October 08, 2015 10:18 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Flint water press release?

Morning,

I'm having connectivity issues with listening to the livestream regarding Flint water. Is there a press release you can send my way? Working on a story now for Reuters.

Also, I appear to not be getting press releases from the Governor's office. Can I please be added again?

Thanks,
Serena Maria Daniels
[redacted]

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 1:31 PM
To: Weiss, Kurt (DTMB)
Subject: RE: Update from Nick's calls

Thx!

-----Original Message-----
From: Weiss, Kurt (DTMB)
Sent: Thursday, October 08, 2015 1:16 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: FW: Update from Nick's calls

Hi Sara,

I checked and doesn't look like you were copied on this, so sending it along.

Kurt Weiss
State Budget Office
517-335-0050

-----Original Message-----
From: Duncan, Nancy (DTMB)
Sent: Thursday, October 08, 2015 10:31 AM
To: Starr, Scott (DTMB); Weiss, Kurt (DTMB); McNeely, Jacques (DTMB); Fosdick, David (DTMB); Kimmith, Dean (DTMB)
Subject: FW: Update from Nick's calls

Keeping you in the loop.

-----Original Message-----
From: Lasher, Geralyn (DHHS)
Sent: Thursday, October 08, 2015 9:32 AM
To: Hanley, Farah (DHHS); Becker, Timothy (DHHS); Grijalva, Nancy (DHHS); Roberts, John (DTMB); Wyant, Dan (DEQ); Duncan, Nancy (DTMB); Harkins, Chris (DTMB); Pallone, Maggie (DEQ); Hertel, Elizabeth (DHHS); Ruest, Karla (DHHS)
Cc: Lyon, Nick (DHHS)
Subject: Update from Nick's calls

Nick has put in calls to our subcommittee chairs and wanted to pass along the feedback he got.

All agree from the health side that the DHHS action is the right way to move forward. However they had some negative feedback on the $6 million.

--Representatives MacGregor and Poleski both feel this should be a loan to the City of Flint instead of direct payment of $6 million

--Senator Marleau complained about the lack of legislative input before the decision was made to switch back to Flint water from Detroit in the first place.

He left messages for Verheulen, Santana, Shirkey and Hertel.

Sent from my iPad

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 2:01 PM
To: Brown, Jessica (GOV); Biehl, Laura (GOV)
Subject: RE: Flint water press release?

Great – thx much

From: Brown, Jessica (GOV)
Sent: Thursday, October 08, 2015 1:36 PM
To: Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>
Subject: RE: Flint water press release?

She was on the list already – wondering if it was a potential spam folder problem. I tried taking her off and then putting her back on. If she says she still has problems let me know and we can call GD.

From: Brown, Jessica (GOV)
Sent: Thursday, October 08, 2015 1:32 PM
To: Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>
Subject: RE: Flint water press release?

Will do.

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 1:29 PM
To: Biehl, Laura (GOV) <BiehlL@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>
Subject: FW: Flint water press release?

Guys – can you please check into this. Serena was at Detroit News, but now does freelance, primarily for Reuters.

Please make sure she's on our media list and database.

From: Serena Maria Daniels [mailto:[redacted]]
Sent: Thursday, October 08, 2015 10:18 AM
To: Wurfel, Sara (GOV) <WurfelS@michigan.gov>
Subject: Flint water press release?

Morning,

I'm having connectivity issues with listening to the livestream regarding Flint water. Is there a press release you can send my way? Working on a story now for Reuters.

Also, I appear to not be getting press releases from the Governor's office. Can I please be added again?

Thanks,
Serena Maria Daniels

[redacted]

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 2:03 PM
To: 'Serena Maria Daniels'
Subject: RE: Flint water press release?

Serena –

Our teams tells me and your gmail address were indeed on our distribution list and that the message was delivered – wondering if it was a potential spam folder problem. Just in case, they tried taking you off and then putting you back on. If you still have any problems, pls let me know and we can call the vendor.

Thx much,
SW

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 1:28 PM
To: 'Serena Maria Daniels' <[redacted]>
Subject: RE: Flint water press release?

You got OK earlier, yes?

Wil have our team double check that again and make sure we get distribution issues resolved.

From: Serena Maria Daniels [mailto:[redacted]]
Sent: Thursday, October 08, 2015 10:18 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Flint water press release?

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I'm having connectivity issues with listening to the livestream regarding Flint water. Is there a press release you can send my way? Working on a story now for Reuters.

Also, I appear to not be getting press releases from the Governor's office. Can I please be added again?

Thanks,
Serena Maria Daniels
[redacted]

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 3:11 PM
To: 'Jonathan Oosting'; Murray, David (GOV)
Subject: RE: State funding for Flint

Hi there Jonathan,

Sorry for delay. Been in back-to-back meetings since getting back from Flint.

Happy to walk you through this, but sounds like Kurt already did? Just let me know.

Thanks much,
SW

From: Jonathan Oosting [mailto:joosting@mlive.com]
Sent: Thursday, October 08, 2015 12:30 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: State funding for Flint

Hi Sara and Dave

Is the governor asking for a total of $6 million from the Legislature (for water switch) or $10 million (plus other action plan costs)? I was a little confused by descriptions in press conference and release.

Jonathan Oosting | MLive Media Group | 313.319.8559 | joosting@mlive.com

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 3:40 PM
To: Jonathan Oosting
Subject: Re: State funding for Flint

Great to hear -

Sent from my iPhone

On Oct 8, 2015, at 3:12 PM, Jonathan Oosting <joosting@mlive.com> wrote:

> Yep, I just talked with Kurt. Thank you!
>
> Jonathan Oosting | MLive Media Group | 313.319.8559 | joosting@mlive.com

---

From: <Wurfel>, "Sara (GOV)" <Wurfels@michigan.gov>
Date: Thursday, October 8, 2015 at 3:11 PM
To: Conde Nast <JOosting@MLive.com>, "Murray, David (GOV)" <MurrayD1@michigan.gov>
Subject: RE: State funding for Flint

Hi there Jonathan,

Sorry for delay. Been in back-to-back meetings since getting back from Flint.

Happy to walk you through this, but sounds like Kurt already did? Just let me know.

Thanks much,
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From: Jonathan Oosting [mailto:joosting@mlive.com]
Sent: Thursday, October 08, 2015 12:30 PM
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Jonathan Oosting | MLive Media Group | 313.319.8559 | joosting@mlive.com

From: Wurfel, Sara (GOV)
Sent: Thursday, October 08, 2015 4:54 PM
To: 'Gary Ridley'
Subject: RE: Snyder plan for Flint water

Hi there Gary –

What I'd say is that … in combination with the other short term, intermediate term and long-term steps outlined last week, this move represents a big step forward and demonstrates the Governor and Administration's deep commitment to protecting public health and ensuring safe, accessible water. We're focused on helping address this challenging issue for the residents of Flint, partnering with the city and collaborating across local, state and federal levels to bring all resources and ideas to bear.

Hope that helps.

Thanks and best,
SW

From: Gary Ridley [mailto:GRIDLEY@mlive.com]
Sent: Thursday, October 08, 2015 3:20 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Snyder plan for Flint water

Sara,
I am working on a follow-up story to today's Flint water announcement and I was hoping you could help me out. I am focusing on what comes next for the people of Flint. I was wondering if the governor's office would comment on what needs to be done to get residents to trust their water system and elected leaders again.

My deadline is noon Friday.

Thanks for the assistance.

--
Gary Ridley | The Flint Journal-MLive Media Group | 810-280-9516 | gridley@mlive.com

From: Wurfel, Sara (GOV)
Sent: Monday, October 12, 2015 5:48 PM
To: 'Gary Ridley'
Subject: RE: Comment sought on Rep. Phelps Files Suit Against State of Michigan, City of Flint

Gary –

I believe the DEQ team can best address this one. Have you already reached out to them? Please let me know and I'll follow up accordingly.

Being transparent and fulfilling FOIA requests is something our administration take very seriously.

From: Gary Ridley [mailto:GRIDLEY@mlive.com]
Sent: Monday, October 12, 2015 3:39 PM
To: Bitely, Andrea (AG) <BitelyA@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Comment sought on Rep. Phelps Files Suit Against State of Michigan, City of Flint

Hi,
I wanted to see if the state had any comment in response to this lawsuit.

Thanks.

--
Gary Ridley | The Flint Journal-MLive Media Group | 810-280-9516 | gridley@mlive.com

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From: Rosemary Jones [mailto:RJones@house.mi.gov]
Sent: Monday, October 12, 2015 1:33 PM
To: Rosemary Jones
Subject: Rep. Phelps Files Suit Against State of Michigan, City of Flint

FOR IMMEDIATE RELEASE
Monday, Oct. 12, 2015

Contact: Rep. Phil Phelps
Phone: (517) 373-7515

Rep. Phelps Files Suit Against State of Michigan, City of Flint

State, city failed to release documents sought in FOIA request

LANSING — State Representative **Phil Phelps** (D-Flushing) announced earlier today that he is filing suit against the state of Michigan and the city of Flint to force them to release public documents he requested last month under the Freedom of Information Act (FOIA).

"It's an absolute shame that I have to file suit to force our government to comply with the law," Phelps said. "I was shocked at their response, because prior to receiving the denials, officials from both the city and state had told me that not only did documents exist, but they would be happy to share them with me."

On Sept. 4 of this year, Phelps requested that the city and state turn over all documents and emails regarding the permit and application process that Flint's emergency manager was required to complete before the Michigan Department of Environmental Quality gave the go ahead to the city to start using the Flint River as its source of drinking water. Late last month, the state and the city both denied Phelps' request, saying that no such documents exist.

In March and April of 2014, officials from both the city and state were also quoted in several articles on Mlive.com, making comments about the permit application process for Flint to switch its source of drinking water from Detroit's system to the Flint River.

"I want to know what these officials knew about the safety and quality of the river water before the switch was made. Judging by their response and recent actions, it almost seems they knew a lot more than they are letting on to," Phelps said. "Flint residents deserve better than this, they deserve to know the truth about the decisions that were made, and if I have to fight this in court to get the truth, so be it."

###

Rosie Jones
Deputy Press Secretary
Michigan House Democrats
O: 517.373.3731
C: [redacted]
housedems.com

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 13, 2015 12:56 PM
To: 'Ronald Fonger'
Subject: RE: MDP Statement: Those Responsible for Flint Water Crisis Must Be Held Accountable
Attachments: DWSD Termination Letter.pdf

My comments are several fold, Ron. This switch to KWA as well as using the community's long-time back-up water supply (Flint River) was pushed or supported by the city and community and that DWSD was terminating Flint from its system (see attached letter again just in case) necessitating another source. We also know Darnell cares deeply about the kids and communities he serves. We're focused on solving this challenging infrastructure issue, moving forward quickly and doing everything we can to ensure that Flint has safe drinking water and protecting public health – both in the immediate short-term, mid-term and long-term. We're also going to be conducting a full after action review.

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Tuesday, October 13, 2015 10:12 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: FW: MDP Statement: Those Responsible for Flint Water Crisis Must Be Held Accountable

Sara:
Would your office want to comment on this call from state Dems for the governor to fire Darnell Earley from his position with the Detroit schools?
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: MDP Press [mailto:press@michigandems.com]
Sent: Tuesday, October 13, 2015 8:52 AM
To: MDP Press
Subject: MDP Statement: Those Responsible for Flint Water Crisis Must Be Held Accountable

FOR IMMEDIATE RELEASE
News from the Michigan Democratic Party

October 13, 2015
Contact: Paul Kanan, 517.371.5410; pkanan@michigandems.com

MDP Statement: Those Responsible for Flint Water Crisis Must Be Held Accountable

LANSING – The Michigan Democratic Party issued the following statement today, on behalf of Party Chair Brandon Dillon, demanding those responsible for the Flint water crisis be held accountable and calling on Governor Snyder to immediately fire former Flint EM, and current EM for Detroit Public Schools, Darnell Earley:

"Accountability in government means answering to the people you serve, not just cleaning up your mistakes using their money," said Brandon Dillon, Chair of the Michigan Democratic Party.

"This catastrophe began with the governor's appointed emergency manager, and as much as Governor Snyder would like to pretend, this is not a matter of negotiating at the boardroom table. This is a situation where you pay for your mistakes and put those responsible on the chopping block.

"That is why we are calling for the immediate firing of the governor's handpicked emergency manager for Flint, Darnell Earley. Earley was in charge when the decision was made to switch the city to unsafe drinking water. If poisoning children wasn't bad enough, after Earley failed the citizens of Flint, the governor inexplicably rewarded him with another appointment – emergency manager for Detroit Public Schools – where he is now responsible for the education of nearly 50,000 students.

"The children of Flint and Detroit are being robbed of what most of us take for granted – safe drinking water and a quality education. The wholesale theft of our children's futures must end now. That begins with the removal from power all those that would sacrifice the future of a single child in Michigan – let alone thousands – in order to add a few extra dollars to the bottom line."

###

City of Detroit
Water and Sewerage Department
Office of the Director

735 Randolph Street
Detroit, Michigan 48226
www.detroitmi.gov

April 17, 2013

RECEIVED
CITY OF FLINT
CITY CLERK'S OFFICE
2013 APR 18 AM 11:33

Via Certified Mail and Electronic Delivery

Ms. Inez M. Brown
City Clerk
City of Flint
2nd Floor, City Hall
1101 S. Saginaw Street
Flint, Michigan 48502

Dear Ms. Brown:

Regarding: Termination of Contract for the Provision of Water Services by the City of Detroit, Water and Sewerage Department

On December 20, 1965, the City of Detroit, through its Board of Water Commissioners, (DWSD) and the City of Flint, Michigan (Flint) entered into a contract for the provision of DWSD treated water to Flint and the distribution by flint of that water to other Genesee County communities. Section 18 of that Agreement[1] provides:

18. The Board [DWSD] shall supply and sell water to the City [Flint] from the water system of the City of Detroit, and the City shall receive and purchase such water in accordance with the terms of this Agreement for an indefinite period of time but at least for a period of thirty-five (35) years from the date hereof. This Agreement may be terminated by either party after expiration of said 35-year period, upon one year's written notice served upon the other party by delivering the same to the Secretary of the Board or to the Clerk of the City as the case may be, or at any time upon mutual consent of both parties.

Please take notice that pursuant to this section, 18, of the above-referenced Agreement, DWSD is terminating this Agreement one year from today's date (April 17, 2014).

Sincerely yours,

Sue F. McCormick
Director

[1] Although the Agreement between DWSD has been subsequently amended, Section 18 remains unchanged and in full effect.

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 13, 2015 1:04 PM
To: 'Kyle Melinn'
Subject: RE: MDP Statement: Those Responsible for Flint Water Crisis Must Be Held Accountable
Attachments: DWSD Termination Letter.pdf

Reaction is several fold, Kyle. This switch to KWA as well as using the community's long-time back-up water supply (Flint River) was pushed or supported by the city and community and that DWSD was terminating Flint from its system (see attached letter again just in case) necessitating another source. We also know Darnell cares deeply about the kids and communities he serves. That said, we're focused on helping solve this challenging infrastructure issue, moving forward quickly and doing everything we can to ensure that Flint has safe drinking water and public health is protected -- both in the immediate short-term, mid-term and long-term. We're also going to be conducting a full after action review.

From: Kyle Melinn [mailto:[redacted]]
Sent: Tuesday, October 13, 2015 11:11 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Fwd: MDP Statement: Those Responsible for Flint Water Crisis Must Be Held Accountable

Good morning, Sara. Have you seen this, yet. What to let you react to it if you like. Take care.

Kyle

---------- Forwarded message ----------
From: **MDP Press** <press@michigandems.com>
Date: Tue, Oct 13, 2015 at 8:52 AM
Subject: MDP Statement: Those Responsible for Flint Water Crisis Must Be Held Accountable
To: MDP Press <press@michigandems.com>

FOR IMMEDIATE RELEASE
News from the Michigan Democratic Party

October 13, 2015
Contact: Paul Kanan, 517.371.5410; pkanan@michigandems.com

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“That is why we are calling for the immediate firing of the governor’s handpicked emergency manager for Flint, Darnell Earley. Earley was in charge when the decision was made to switch the city to unsafe drinking water. If poisoning children wasn’t bad enough, after Earley failed the citizens of Flint, the governor inexplicably rewarded him with another appointment – emergency manager for Detroit Public Schools – where he is now responsible for the education of nearly 50,000 students.

“The children of Flint and Detroit are being robbed of what most of us take for granted – safe drinking water and a quality education. The wholesale theft of our children’s futures must end now. That begins with the removal from power all those that would sacrifice the future of a single child in Michigan – let alone thousands – in order to add a few extra dollars to the bottom line.”

###

City of Detroit
Water and Sewerage Department
Office of the Director

735 Randolph Street
Detroit, Michigan 48226
www.detroitmi.gov

RECEIVED
CITY OF FLINT
CITY CLERK'S OFFICE
2013 APR 18 AM 11:23

April 17, 2013

Via Certified Mail and Electronic Delivery

Ms. Inez M. Brown
City Clerk
City of Flint
2nd Floor, City Hall
1101 S. Saginaw Street
Flint, Michigan 48502

Dear Ms. Brown:

Regarding: Termination of Contract for the Provision of Water Services by the City of Detroit, Water and Sewerage Department

On December 20, 1965, the City of Detroit, through its Board of Water Commissioners, (DWSD) and the City of Flint, Michigan (Flint) entered into a contract for the provision of DWSD treated water to Flint and the distribution by flint of that water to other Genesee County communities. Section 18 of that Agreement[1] provides:

18. The Board [DWSD] shall supply and sell water to the City [Flint] from the water system of the City of Detroit, and the City shall receive and purchase such water in accordance with the terms of this Agreement for an indefinite period of time but at least for a period of thirty-five (35) years from the date hereof. This Agreement may be terminated by either party after expiration of said 35-year period, upon one year's written notice served upon the other party by delivering the same to the Secretary of the Board or to the Clerk of the City as the case may be, or at any time upon mutual consent of both parties.

Please take notice that pursuant to this section, 18, of the above-referenced Agreement, DWSD is terminating this Agreement one year from today's date (April 17, 2014).

Sincerely yours,

Sue F. McCormick
Director

[1] Although the Agreement between DWSD has been subsequently amended, Section 18 remains unchanged and in full effect.

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 13, 2015 1:56 PM
To: Stanton, Terry A. (Treasury)
Subject: RE: Flint

This will work for now and is what needed immediately – thx!

From: Stanton, Terry A. (Treasury)
Sent: Tuesday, October 13, 2015 1:40 PM
To: Wurfel, Sara (GOV) <WurfelS@michigan.gov>
Cc: Heaton, Anna (GOV) <HeatonA@michigan.gov>; Kennedy, Jordan (GOV) <KennedyJ4@michigan.gov>
Subject: Flint
Importance: High

As requested, see below and attached. Let me know if this is what you need.

Flint EM dates (financial emergency declared in December 2011)

Mike Brown, apptd 12-1-11 (when fin emer declared under PA 4 of 2011)
Ed Kurtz, apptd 8-8-12 (when PA4 was repealed in Aug 2012, Brown couldn't serve as EM, PA 72 back in effect)
Mike Brown, apptd 7-4-13 (Kurtz retired; PA436 in effect)
Darnell Earley, apptd 10-8-13 (Brown resigned)
Gerald Ambrose, apptd 1-13-15 (Earley appointed DPS EM)

Financial Emergency resolved, 4-29-15 (RTAB apptd)

Other dates

June 26, 2012 – Letter from EM Brown to DWSD seeking permission to blend river water with DWSD water (attached).

Sept. 20, 2012 – Letter from EM Kurtz to DWSD requesting written permission to implement blending (attached).

March 25, 2013 – The Flint City Council endorses joining KWA (see url below)
http://blog.mlive.com/newsnow_impact/print.html?entry=/2013/03/flint_city_council_approves_re.html

April 11, 2013 – Treasurer Dillion sends letter to EM Kurtz (attached) noting conditional approval of move to KWA (pursuant to PA436), pending a review of DWSD's last, best offer.

April 16, 2013 – EM Kurtz informs Treasury that the City will join KWA (attached).

April 17, 2013 – DWSD transmits letter to EM Kurtz terminating service to Flint, effective April 17, 2014 (attached).

April 17, 2014 – Water service from DWSD officially ends.

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 13, 2015 3:09 PM
To: Saxton, Thomas (Treasury)
Subject: RE: Flint Water Issue: Memorandum RTAB1.PDF

Many thanks for passing along, Tom!

From: Saxton, Thomas (Treasury)
Sent: Tuesday, October 13, 2015 11:51 AM
To: Wyant, Dan (DEQ) <WyantD@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Cc: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Stanton, Terry A. (Treasury) <StantonT@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Subject: FW: Flint Water Issue: Memorandum RTAB1.PDF
Importance: High

Just fyi... the reconnect to DWSD is hitting the RTAB agenda tomorrow. We are not foreseeing any problems in terms of its approval.

From: Workman, Wayne (TREASURY)
Sent: Tuesday, October 13, 2015 10:44 AM
To: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>
Cc: Stanton, Terry A. (Treasury) <StantonT@michigan.gov>
Subject: FW: Flint Water Issue: Memorandum RTAB1.PDF
Importance: High

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Cline, Richard (Treasury)
Sent: Tuesday, October 13, 2015 10:40 AM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Byrne, Randall (Treasury) <ByrneR1@michigan.gov>; Schafer, Suzanne K. (Treasury) <SchaferS7@michigan.gov>; Koryzno, Edward (Treasury) <KoryznoE@michigan.gov>
Subject: Flint Water Issue: Memorandum RTAB1.PDF
Importance: High

FYI.

I just received this from Natasha regarding the City's request to reconnect to DWSD.

The City is asking that the RTAB consider this tomorrow. I am in the process of sending this to the Board.

It appears that the City is planning on taking the $2M from Fund Balance.

Eric Cline | Department Manager | State of Michigan

Michigan Department of Treasury | Local Government Financial Services Division | Fiscal Responsibility Section
430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
Lansing Office (517) 335-2078 | Cell Phone [redacted] | Traverse City Office (231) 922-5228
E-mail cliner1@michigan.gov

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From: Natasha Henderson [mailto:[redacted]
Sent: Tuesday, October 13, 2015 10:16 AM
To: Dempkowski, Angela (Treasury) <DempkowskiA@michigan.gov>; Cline, Richard (Treasury) <cliner1@michigan.gov>
Subject: Memorandum RTAB1.PDF

Hello Eric,

Per your request, I have attached a request to add two high priority items to the RTAB agenda.

Thanks,

Natasha L. Henderson

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 14, 2015 4:50 PM
To: 'Stanton, Terry A. (Treasury)'; Murray, David (GOV)
Cc: Workman, Wayne (TREASURY); Koryzno, Edward (Treasury)
Subject: RE: Flint RTAB

Thanks much for the update, Terry. One more key step down.

Very surprised by light media turnout.

-----Original Message-----
From: Stanton, Terry A. (Treasury)
Sent: Wednesday, October 14, 2015 3:15 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Cc: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Koryzno, Edward (Treasury) <KoryznoE@michigan.gov>
Subject: Flint RTAB

Only two media outlets (flt journal and weyi TV) at today's meeting.

All went fairly smooth with the RTAB unanimously approving the two resolutions in question (in addition to several others dealing with other financial issues).

Only 2 people made public comment...one of whom was councilman Eric Mays who shared his typical "stuff."

No other real issues etc.

Let me know if you have any questions.

TS

From: Wurfel, Sara (GOV)
Sent: Thursday, October 15, 2015 1:18 PM
To: 'Macaluso, Nora'; Murray, David (GOV)
Subject: RE: flint water

As soon as we can receive it, Nora. Hopefully yet today to help keep the process moving forward as quickly as possible.

Governor appreciates the quick action and unanimous support from the Legislature and everyone working and pulling together on this priority.

From: Macaluso, Nora [mailto:nmacaluso@bna.com]
Sent: Thursday, October 15, 2015 1:04 PM
To: Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: flint water

Can you tell me when governor will sign Flint water appropriations bill?
thanks

>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Nora Macaluso
Staff Correspondent

Bloomberg BNA

Direct/Mobile [redacted]
nmacaluso@bna.com

From: Wurfel, Sara (GOV)
Sent: Friday, October 16, 2015 2:07 PM
To: Murray, David (GOV)
Subject: Re: Please bless our reaction to the US EPA announcement?

Dave will you please make sure sure to share with Jared, Dennis, Rich, and Harvey too?

Sent from my iPhone

On Oct 16, 2015, at 1:02 PM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:

> Just one little change, a matter of subject and verb agreement:
>
> Regarding the EPA announcement:
> "We are glad to have the continued technical support and counsel from our federal partners. We have been working closely with the U.S. EPA on the challenges in Flint, including **its** added presence on the city's technical advisory and the Governor's 10-point plan. This is welcome news and we anticipate it will help us implement the Governor's strategy."

From: Wurfel, Brad (DEQ)
Sent: Friday, October 16, 2015 2:01 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Please bless our reaction to the US EPA announcement?

Regarding the EPA announcement:
"We are glad to have the continued technical support and counsel from our federal partners. We have been working closely with the U.S. EPA on the challenges in Flint, including their added presence on the city's technical advisory and the Governor's 10-point plan. This is welcome news and we anticipate it will help us implement the Governor's strategy."

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted] cell

From: Wurfel, Sara (GOV)
Sent: Monday, October 19, 2015 2:35 PM
To: Wurfel, Brad (DEQ)
Cc: Murray, David (GOV)
Subject: Re: Third-Party review question

Send him our way, pls - we're going to say something like this for now "Pulling together this after action review team and plan is actively underway now. We'll have something to announce and discuss soon."

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

On Oct 19, 2015, at 2:32 PM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

> Where we at with this announcement?
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> **From:** "Wisely, John" <jwisely@freepress.com>
> **Date:** October 19, 2015 at 12:52:49 PM EDT
> **To:** "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
> **Subject: Third-Party review question**
>
> Brad:
>
> The statement from Dan Wyant includes this:
> The Governor has called for an independent, third-party after-action review.
>
> Questions:
> Who/what is the third party?
> Is it the legislature?
> A committee of experts to be appointed?
> Senate Minority leader (from Flint) wants legislative review. Is that something the state is prepared to assist with?
> Please let me know asap.
>
> John Wisely
> Reporter
>
> Phone: 313-222-6825
> jwisely@freepress.com
> Follow me on Twitter: @jwisely

Freep.com

From: Wurfel, Sara (GOV)
Sent: Tuesday, October 20, 2015 12:14 PM
To: 'Jacob Kanclerz'; Murray, David (GOV)
Subject: RE: RELEASE: Progress Michigan: MDEQ's Wyant Needs to Go

How is this another story after yesterday's MIRS and this is from then too?

From: Jacob Kanclerz [mailto:jacob@mirsnews.com]
Sent: Tuesday, October 20, 2015 11:59 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: Fwd: RELEASE: Progress Michigan: MDEQ's Wyant Needs to Go

Sara and Dave,

Good morning (still). Thanks for your help in tightening up the DPS alert yesterday.

Would you guys mind providing a response to this and also the Dems calling for Wyant to step down yesterday? Gov. Snyder holds the power to make this decision, so I'd like to know if he would consider doing this as the state evaluates how it handled the Flint water situation. Thank you.

---------- Forwarded message ----------
From: **Progress Michigan** <progress@progressmichigan.org>
Date: Tue, Oct 20, 2015 at 10:52 AM
Subject: RELEASE: Progress Michigan: MDEQ's Wyant Needs to Go
To: Jacob Kanclerz <jacob@mirsnews.com>

FOR IMMEDIATE RELEASE
News from Progress Michigan

October 20, 2015

Contact: Sam Inglot, 616-916-0574, sam@progressmichigan.org

Progress Michigan: MDEQ's Wyant Needs to Go

The Flint water crisis shows a lack of leadership at the MDEQ

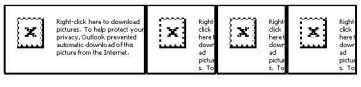
LANSING — In the wake of the Flint water crisis, where children across the city were poisoned with high levels of lead in the drinking water, Progress Michigan is calling for the ouster of the head of the Michigan

Department of Environmental Quality, Dan Wyant.

Recent reports show that Wyant and the MDEQ were warned by the Environmental Protection Agency as early as February that lead was leaching into the water pipes in Flint due to the corrosive nature of the Flint River water. Gov. Rick Snyder's emergency manager made the switch from Detroit water to Flint River water.

"You can't simply reshuffle some staff at the department to make up for poisoning thousands of Flint children. When families and kids are told their drinking water is safe and it's actually filled with toxins, someone needs to be held accountable. It starts at the top with Wyant," **said Lonnie Scott, executive director of Progress Michigan.** "He needs to resign immediately or Gov. Snyder needs to quickly show him the door. This crisis was allowed to fester and grow under his watch and Wyant needs to go. Families in Flint deserve to know that Gov. Snyder is taking this problem seriously and is willing to take serious action."

###



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Jacob Kanclerz
Reporter, MIRS News
Office: 517-482-2125
Cell: [redacted]
Twitter: @jacobkanclerz

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 21, 2015 1:02 PM
To: Kathryn Thomas - Mott Foundation
Subject: Fwd: Planned release on Flint Water Task Force
Attachments: PR 151020 Flint after action 6.docx; ATT00001.htm

Kathryn -

Just wanted to make sure you and the Foundation team had a heads up on this announcement, currently slated for 2 pm this afternoon.

This is follow up and details of Governor's after action review that he talked about when we were last together.

Appreciate keeping confidential until word is out.

Please let me know if you have any Qs or may need anything further at all.

Thanks and best,
SW

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

Begin forwarded message:

Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Experts in public health, water management, environmental protection to focus on steps to protect residents

LANSING, Mich. – Gov. Rick Snyder today announced the creation of an independent advisory task force charged with reviewing actions regarding water use and testing in Flint and offer recommendations for future guidelines to protect the health and safety of all state residents.

Task force members include experts in public health and medicine, water management, and environmental protection from both sides of the aisle, and will be co-chaired by Ken Sikkema of Public Sector Consultants and Chris Kolb, of the Michigan Environmental

Council. Also serving will be Dr. Matthew Davis of the University of Michigan Health System, Eric Rothstein, of the Galardi Rothstein Group and Dr. Lawrence Reynolds of Mott Children's Health Center in Flint.

"Transitioning back to the Detroit Water and Sewerage Department-Great Lakes Water Authority is a good first step to protecting public health in Flint, but it's not the last step," Snyder said. "Bringing in outside experts to evaluate our actions and help monitor and advise on potential changes to law, procedures and practices will be key to continuing work on the comprehensive action plan and ensuring safe drinking water for all the residents in Flint and all of Michigan."

Snyder said the administration will fully cooperate with task force members, saying he wants an unbiased report focusing on steps taken in the past and recommendations that could improve practices to ensure all residents have access to safe, clean water.

Ken Sikkema is a senior policy fellow at Public Sector Consultants, where he specializes in public finance, environment, and energy policy. Prior to joining the firm, Sikkema served in both the Michigan House and Senate, culminating with four years as Senate majority leader. He has also served as both an adjunct and visiting professor at Grand Valley State University.

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Matthew Davis, M.D., M.A.P.P., is professor of pediatrics and internal medicine at the University of Michigan Health System and professor of public policy at the Gerald R. Ford School at the University of Michigan, having joined the faculty in 2000. Davis also is a professor of health management and policy at the School of Public Health. He previously served as the chief medical executive of the Michigan Department of Community Health/Department of Health and Human Services.

Eric Rothstein is a national water issues consultant and principal at the Galardi Rothstein Group. He served as an independent advisor on the creation of the Great Lakes Water Authority. Rothstein also has served as Jefferson County, Alabama's rate consultant and municipal adviser for litigation related to the county's bankruptcy and issuance of $1.7 billion in sewer warrants and led strategic financial planning for the City of Atlanta's Department of Watershed Management. He has more than 30 years of

experience in water, wastewater and stormwater utility finance and rate-making assessments.

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Snyder has said reconnecting with the authority is a critical step to resolving water quality issues and addressing related health concerns. It will not immediately resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control.

To best protect public health, state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure. The Michigan Departments of Environmental Quality and Health and Human Services are continuing to provide free water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

####

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

Contacts: Sara Wurfel or Dave Murray 517-335-6397	**FOR IMMEDIATE RELEASE** Wednesday, Oct. 21, 2015

Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Experts in public health, water management, environmental protection to focus on steps to protect residents

LANSING, Mich. – Gov. Rick Snyder today announced the creation of an independent advisory task force charged with reviewing actions regarding water use and testing in Flint and offer recommendations for future guidelines to protect the health and safety of all state residents.

Task force members include experts in public health and medicine, water management, and environmental protection from both sides of the aisle, and will be co-chaired by Ken Sikkema of Public Sector Consultants and Chris Kolb, of the Michigan Environmental Council. Also serving will be Dr. Matthew Davis of the University of Michigan Health System, Eric Rothstein, of the Galardi Rothstein Group and Dr. Lawrence Reynolds of Mott Children's Health Center in Flint.

"Transitioning back to the Detroit Water and Sewerage Department-Great Lakes Water Authority is a good first step to protecting public health in Flint, but it's not the last step," Snyder said. "Bringing in outside experts to evaluate our actions and help monitor and advise on potential changes to law, procedures and practices will be key to continuing work on the comprehensive action plan and ensuring safe drinking water for all the residents in Flint and all of Michigan."

Snyder said the administration will fully cooperate with task force members, saying he wants an unbiased report focusing on steps taken in the past and recommendations that could improve practices to ensure all residents have access to safe, clean water.

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####

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 21, 2015 2:14 PM
To: Ed White - AP; David Eggert - AP
Subject: Fwd: Flint Water Task Force
Attachments: PR 151020 Flint after action 6.docx; ATT00001.htm

AP team -

Just an FYI - this is an announcement that will be going out shortly.

This is the follow up and details of Governor's after action review that he and we have talked about.

Please let me know if you have any Qs or may need anything further at all. I know the two co-chairs are more than happy to talk with you.

Thanks and best,

SW

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

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From: Wurfel, Sara (GOV)
Sent: Wednesday, October 21, 2015 2:17 PM
To: John Wisely; Robin Erb; Nancy Kaffer
Subject: Fwd: Flint Water Task Force
Attachments: PR 151020 Flint after action 6.docx; ATT00001.htm

Freep team -

Just a heads up - this is an announcement that will be going out very shortly.

This is the follow up and details of Governor's after action review that he and we have talked about.

Please let me know if you have any Qs or may need anything further at all. I know the two co-chairs are more than happy to talk with you.

Thanks and best,

SW

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

Begin forwarded message:

Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Experts in public health, water management, environmental protection to focus on steps to protect residents

LANSING, Mich. – Gov. Rick Snyder today announced the creation of an independent advisory task force charged with reviewing actions regarding water use and testing in Flint and offer recommendations for future guidelines to protect the health and safety of all state residents.

Task force members include experts in public health and medicine, water management, and environmental protection from both sides of the aisle, and will be co-chaired by Ken Sikkema of Public Sector Consultants and Chris Kolb, of the Michigan Environmental Council. Also serving will be Dr. Matthew Davis of the University of Michigan Health System, Eric Rothstein, of the Galardi Rothstein Group and Dr. Lawrence Reynolds of Mott Children's Health Center in Flint.

"Transitioning back to the Detroit Water and Sewerage Department-Great Lakes Water Authority is a good first step to protecting public health in Flint, but it's not the last step," Snyder said. "Bringing in outside experts to evaluate our actions and help monitor and advise on potential changes to law, procedures and practices will be key to continuing work on the comprehensive action plan and ensuring safe drinking water for all the residents in Flint and all of Michigan."

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####

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

Contacts: Sara Wurfel or Dave Murray 517-335-6397	**FOR IMMEDIATE RELEASE** Wednesday, Oct. 21, 2015

Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Experts in public health, water management, environmental protection to focus on steps to protect residents

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####

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 21, 2015 2:55 PM
To: Ronald Fonger
Subject: Re: governor's task force on flint water

Ron, am on the road with Governor at moment, so do have to respond by email. The task force will operate as transparently as possible and there are certainly expected to be opportunities for public input.

The task force will be independent and our administration has pledged full and complete cooperation.

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

On Oct 21, 2015, at 2:45 PM, Ronald Fonger <RFONGER1@mlive.com> wrote:

> Hi Sara:
> I have a few questions on the task force news release.
> Will the task force meet in public? Will it operate under the provisions of the Open Meetings Act?
> Will they have subpoena powers?
> If it's easier to respond via email, that works for me. If it's easier to call, please do.
> Thanks,
>
> **Ron Fonger**
> MLive Media Group
> Reporter
>
> mobile [redacted]
> email rfonger1@mlive.com
> address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 21, 2015 2:57 PM
To: Jake Neher
Cc: Murray, David (GOV)
Subject: Re: NEWS RELEASE: Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

I'm with governor on a couple of tv interviews at moment, but if hard deadline, am sure Dave can cover if he can swing his schedule.

Also, know the two co-chairs are available and more than happy to talk with you too.

Thanks and best,
SW

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

> On Oct 21, 2015, at 2:52 PM, Jake Neher <jaken@mprn.org> wrote:
>
> Is there someone who could talk on tape about this? Hoping to get a
> phone interview in before 3:30, if possible. Thanks.
>
>
> Jake Neher
> State Capitol Reporter
> Michigan Public Radio Network
> jaken@mprn.org
> [redacted][cell]
> 819 N. Washington Ave.
> Lansing, Michigan 48906
>>>> "GOV Newsroom" <govnewsroom@govsubscriptions.michigan.gov> 10/21/15
> 2:07 PM >>>
> COMM News Release
>
>
>
> *Contacts*: Sara Wurfel <wurfels@michigan.gov> or Dave Murray
> <murrayd1@michigan.gov>517-335-6397
>
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>
> *FOR IMMEDIATE RELEASE
> *Wednesday, Oct. 21, 2015
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> *Gov. Rick Snyder announces Flint Water Task Force to review state,
> federal and municipal actions, offer recommendations [
> http://www.michigan.gov/snyder/0,4668,7-277-57577_57657-367761--,00.ht
> ml
>] *
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> STAY CONNECTED: Visit us on Facebook [
> http://www.facebook.com/GovernorRickSnyder] Visit us on Twitter [
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> https://public.govdelivery.com/accounts/MIGOV/subscriber/new]
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> _____
> __
>
> This email was sent to jaken@mprn.org on behalf of: The Executive
> Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909
> ·
> 517-335-7858
>
>

From: Wurfel, Sara (GOV)
Sent: Thursday, October 22, 2015 9:35 AM
To: Saxton, Thomas (Treasury); Stanton, Terry A. (Treasury)
Cc: Roberts, John (DTMB); Weiss, Kurt (DTMB)
Subject: FW: state money for detroit water

Please see below. Calling to touch base shortly.

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Thursday, October 22, 2015 9:28 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: state money for detroit water

Sara:
I was at a City Council meeting last night when Flint City Administrator Natasha Henderson said the state has only wired Flint $2 million of the $6 million approved by the state Legislature.
She said the city has been told it will receive an additional $2 million in January and another $2 million in April.
Henderson said she's asked that the money be sent immediately because the city was required to pay Detroit the entire $12 million upfront, before the water was reconnected, and its water and sewer fund balance has dropped significantly as a result.
Several council members also spoke about this, and Council President Josh Freeman called the payment plant "beyond ridiculous" given the city's financial position.
Is there someone who can talk to us about this?
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Thursday, October 22, 2015 10:00 AM
To: 'Ronald Fonger'
Subject: RE: state money for detroit water

Ron – for your background only right now, this doesn't match my understanding of how this was supposed to work and happen. Checking into now and will get back to you asap.

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Thursday, October 22, 2015 9:38 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: state money for detroit water

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mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Thursday, October 22, 2015 12:18 PM
To: 'Ronald Fonger'
Subject: RE: state money for detroit water

We're close to having details tracked down. Hoping you can hold off another ½ hour or so. Should have ironed out by then.

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Thursday, October 22, 2015 11:56 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: state money for detroit water

Hi Sara. Any ETA? I need to write something pretty soon but definitely prefer to include your perspective on this.

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mobile [redacted]
email rfonger1@mlive.com
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From: Wurfel, Sara (GOV)
Sent: Thursday, October 22, 2015 1:17 PM
To: 'Ronald Fonger'
Subject: RE: state money for detroit water

Ok, Ron, here's our update and response.

Our understanding of the original plan and agreement to re-connect with GLWA-DWSD called for monthly payments from the city. Unbeknownst to the state, the city entered into an arrangement with GLWA-DWSD for one upfront sum and payment.

We want to help ensure that there are absolutely no complications or interruptions in Flint residents receiving water from GWLA-DWSD, so we are taking steps to immediately wire the remaining money to the city now that we are aware of, and have confirmed, this final arrangement. They should have all of the state funds within a business day or two.

Thanks for checking in and flagging this.

Best,
SW

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Thursday, October 22, 2015 12:20 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: state money for detroit water

Yes I'll wait.
Appreciate the update

From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
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From: Wurfel, Sara (GOV)
Sent: Monday, October 26, 2015 10:14 AM
To: 'Agen, Jarrod (GOV)'; Murray, David (GOV)
Cc: Adler, Ari (GOV)
Subject: RE: Lead-free hashtag?

I'm on it -- my head is going to explode.

From: Agen, Jarrod (GOV)
Sent: Monday, October 26, 2015 10:13 AM
To: Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Cc: Adler, Ari (GOV) <AdlerA@michigan.gov>
Subject: Re: Lead-free hashtag?

Sara or Dave --
Please call DHHS and tell them not to use that # anymore.

On Oct 26, 2015, at 9:27 AM, Adler, Ari (GOV) <AdlerA@michigan.gov> wrote:

> This could get ugly today on social media...
>
> Michigan HHS Dept MichiganHHS
> 25 Oct
> National #LeadPoisoning Prevention Week is October 25-31. Learn more about lead exposure: https://t.co/Nt0nMn72xi #LPPW2015 #leadfreekids
>
> --
> Ari B. Adler
> Special Projects Manager
> Executive Office of Gov. Rick Snyder
> adlera@michigan.gov
> 517-599-5445

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 28, 2015 8:54 AM
To: 'Buhs, Caleb (DTMB)'; Murray, David (GOV); Wurfel, Brad (DEQ)
Subject: RE: Protest Event - Constitution Hall

Thanks much, though this looks like it was supposed to be yesterday? Anything happen?

From: Buhs, Caleb (DTMB)
Sent: Wednesday, October 28, 2015 8:36 AM
To: Murray, David (GOV) <MurrayD1@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>
Subject: FW: Protest Event - Constitution Hall

I wanted to make sure you were all aware of this. I don't have any more details right now, but could try to find out, if necessary.

-Caleb

From: Pratt, Jeff (DTMB)
Sent: Tuesday, October 27, 2015 6:14 PM
To: Behen, David (DTMB) <Behend@michigan.gov>; Davenport, Rodney (DTMB) <DavenportR1@michigan.gov>; Stibitz, Brom (DTMB) <StibitzB@michigan.gov>; Jeffery, Phillip (DTMB) <Jefferyp@michigan.gov>; Swanson, Eric (DTMB) <swansone@michigan.gov>; Buhs, Caleb (DTMB) <BuhsC@michigan.gov>; McFarlane, James (DTMB) <mcfarlanej@michigan.gov>; Gelisse, Ashley (DTMB) <GelisseA@michigan.gov>; Kopacsi, Christian (DTMB) <KopacsiC@michigan.gov>; Turnquist, Michael (DTMB) <TurnquistM@michigan.gov>
Cc: Christensen, Chris (DTMB) <christensenc4@michigan.gov>; Stanaway, Deb (DTMB) <StanawayD@michigan.gov>; Arend-Ritter, Saige (DTMB) <Arend-RitterS@michigan.gov>
Subject: Protest Event - Constitution Hall

DTMB Leadership,

For your awareness there is a protest event planned for Tuesday Oct. 27th outside Constitution Hall between 12 noon and 4:00pm. The event is a response to the water situation in Flint. Please plan your daily activities with this in mind as a large turnout for this event is anticipated. DTMB and MSP are working together and will monitor the situation.

Please let us know if you have any questions or require additional details.

Thanks,

Jeff

Jeff Pratt
Michigan Department of Technology, Management & Budget
Cybersecurity and Infrastructure Protection
Office of Infrastructure Protection
Cell: ([redacted]
Office: (517) 241-4391

Attention

BMB Central Control

Available 24/7

(517) 373-0196

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 28, 2015 12:36 PM
To: 'Kiertzner, James'; Murray, David (GOV)
Subject: RE: Requesting on camera interview with the Governor

Hi there Jim –

Gov's schedule is really, really challenging over next couple of weeks for any 1:1s like this, and best we may be able to do is something at media avails at regularly scheduled events or quick pull aside from there.

But will see what can do.

Thanks for reaching out and more soon,
SW

From: Kiertzner, James [mailto:jim.kiertzner@wxyz.com]
Sent: Wednesday, October 28, 2015 10:37 AM
To: Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: Requesting on camera interview with the Governor

In the next week or so, I'm requesting an on camera interview with the Governor on these topics:

DPS school aid, taken up yesterday with the Treasurer and EM

Roads fix

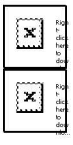
Flint Water

Let me know when you can.

We could do in metro Detroit, or come up to Lansing.

Thanks in advance,

Jim



Jim Kiertzner
7 Investigator
WXYZ Detroit
W: 248-827-9407
C: [redacted]
jimk@wxyz.com
20777 West 10 Mile Road

Southfield, Michigan 48075
Twitter: kiertzner7

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From: Wurfel, Sara (GOV)
Sent: Wednesday, October 28, 2015 5:43 PM
To: 'Kaffer, Nancy'; Murray, David (GOV)
Subject: RE: Question about the Flint panel

So glad you dropped a note again, Nancy. Have no idea how missed this earlier – apparently a flurry of emails all the same time.

The task force has full independence and our administration has pledged full and complete cooperation. It will operate as transparently as possible and there are expected to be opportunities for public input. The goal and mission is to conduct a thorough independent review of decisions and practices at the state, federal and city level concerning water in Flint.

The task force isn't a public body (it doesn't make policy and doesn't govern anything). They're a group of dedicated professionals who have volunteered to conduct an outside investigation of an issue and report recommendations and findings to the Governor. We fully plan on sharing that.

Thanks and best,
SW

From: Kaffer, Nancy [mailto:nkaffer@freepress.com]
Sent: Wednesday, October 28, 2015 5:26 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: FW: Question about the Flint panel

Roping Dave in, here, because Sara, I know you've been dealing with some family business.

Nancy Kaffer
Columnist
Detroit Free Press
www.freep.com/abettermichigan
313-222-6585
@nancykaffer, @abettermi

From: Kaffer, Nancy
Sent: Tuesday, October 27, 2015 4:16 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Question about the Flint panel

So, the panel that's looking at Flint – it reports to the governor, yes? Does that mean its reports/notes/interim work/final product won't be subject to FOIA?

N

Nancy Kaffer
Columnist
Detroit Free Press

www.freep.com/abettermichigan
313-222-6585
@nancykaffer, @abettermi

From: Wurfel, Sara (GOV)
Sent: Wednesday, October 28, 2015 9:23 PM
To: Murray, David (GOV)
Subject: Re: change agent consortium

Good grief. The fact that this even had to be pointed out and requested is so sad, but good for you.

Sent from my iPhone

On Oct 28, 2015, at 8:46 PM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:

> **From:** Murray, David (GOV)
> **Sent:** Wednesday, October 28, 2015 8:33 PM
> **To:** 'Ronald Fonger' <RFONGER1@mlive.com>
> **Subject:** RE: change agent consortium
>
> Thanks!
>
> **From:** Ronald Fonger [mailto:RFONGER1@mlive.com]
> **Sent:** Wednesday, October 28, 2015 8:30 PM
> **To:** Murray, David (GOV) <MurrayD1@michigan.gov>
> **Subject:** RE: change agent consortium
>
> Dave: Sorry I've been rushing, covering Congressman Kildee's town hall.
> I see your point, and will update the post to include it in response.
>
> **Ron Fonger**
> MLive Media Group
> Reporter
>
> mobile [redacted]
> email rfonger1@mlive.com
> address 540 S. Saginaw St. #101, Flint MI 48502
>
> **From:** Murray, David (GOV) [mailto:MurrayD1@michigan.gov]
> **Sent:** Wednesday, October 28, 2015 8:12 PM
> **To:** Ronald Fonger
> **Cc:** Bryn Mickle; Wurfel, Sara (GOV)
> **Subject:** RE: change agent consortium
>
> Bryn and Ron,

Please help. We're confused by the part of my statement that directly addresses the concerns raised by Rev Bulloch was omitted from the story.

Rev. Bulloch says: "There doesn't seem to be a sense of urgency around responsibility and accountability" for Flint's water emergency, Bullock said.

The omitted part of my quote says: "The task force expects to complete its work within three months. It would be premature to take any action until after the task force submits its report."

Leaving this out appears I was dodging the question. I instead addressed it head on. Can you please add that important detail to the story?

Thanks,

Dave

From: Murray, David (GOV)
Sent: Wednesday, October 28, 2015 3:42 PM
To: 'Ronald Fonger' <RFONGER1@mlive.com>
Subject: RE: change agent consortium

We had a good, respectful meeting with a small group from Flint that included pastors, concerned residents and Councilman Mays.

Gov. Snyder has assembled a third-party task force that includes respected experts in public health, water management and environmental protection for an unbiased review of all actions of the city, state and federal governments regarding water use and testing in Flint.

That task force is expected to look at what occurred as well as make recommendations for what should happen moving forward because we believe that Flint residents need clean, safe water. The task force expects to complete its work within three months. It would be premature to take any action until after the task force submits its report.

Meanwhile, the Department of Environmental Quality and the Department of Health and Human Services continue to work with city leaders, educators and residents to continue testing and carrying out other aspects of the governor's action plan.

Dave

rom: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Wednesday, October 28, 2015 3:14 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: change agent consortium

Dave: I just spoke to Rev. Bullock, who said he spoke with you as his group called for the governor to fire Dan Wyant today.

We also have some video from our Lansing hub.
The pastor indicated the group raised questions with you about the task force on Flint water and said he left the conversation feeling, "There doesn't seem to be a sense of urgency around responsibility and accountability."
Would you want to comment on the group's request and/or your conversation with them today.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Thursday, October 29, 2015 10:15 AM
To: Eisner, Jennifer (DHHS); Murray, David (GOV); Brown, Jessica (GOV); Wurfel, Brad (DEQ); Tommasulo, Karen (DEQ)
Cc: Lasher, Geralyn (DHHS); Minicuci, Angela (DHHS)
Subject: RE: Lead Awareness Week PR

Other than it being Thursday and nearly already the end of the week? Afraid that may do more harm than good.

Also, aren't there updates on both water testing and blood lead level results coming out today?

From: Eisner, Jennifer (DHHS)
Sent: Thursday, October 29, 2015 9:41 AM
To: Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Tommasulo, Karen (DEQ) <TommasuloK@michigan.gov>
Cc: Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>
Subject: Lead Awareness Week PR

Good morning:

Today we will be issuing the lead awareness week press release. Please let me know if there are any last-minute concerns or issues.

Thank you,

Jennifer (Smith) Eisner
Public Information Officer
Michigan Department of Health and Human Services
517-241-2112

All Michigan Families Encouraged to Learn More, Reduce Lead Exposure in Homes

LANSING, Mich. – Nearly half a million children in the United States have elevated blood lead levels that could cause significant damage to their health, estimates the Centers for Disease Control and Prevention, and more than 3,000 Michigan children test positive for lead poisoning each year. Elevated blood lead levels in children is based on 5 micrograms per deciliter or higher.

In response to recent elevated blood lead levels detected in some Flint children, as well as in support of National Lead Poisoning Prevention Week October 25-31, the Michigan Department of Health and Human Services is working to raise awareness and education around childhood lead poisoning prevention across the state.

"Awareness is the best defense against lead poisoning, and unfortunately in Michigan, we know that we still have too many children exposed to lead," said Dr. Eden Wells, Chief Medical Executive with MDHHS. "By making parents and

caregivers aware of exposure hazards and teaching them safe cleaning and remediation practices, we can go a long way toward ensuring that children don't suffer lifelong health impacts from lead poisoning."

Levels in some Flint children increased after a 2014 change in water source. To address this, MDHHS is continuing to offer free NSF-certified water filters to residents and supporting the actions of the Genesee County Health Department. Further, an action plan to test all at-risk children in Flint is being implemented in partnership with local providers, health plans, and community organizations.

Major sources of lead exposure to U.S. children include lead-based paint and lead-contaminated dust in deteriorating buildings. Children can also be exposed to lead from additional sources including contaminated drinking water, take-home exposures from a workplace, and lead in soil.

This year's NLPPW theme, "Lead-Free Kids for a Healthy Future," underscores the importance of testing your home, testing your child, and learning how to prevent lead poisoning's serious health effects. Parents can reduce a child's exposure to lead in many ways, including:

- Get your Home Tested. If you live in a home built prior to 1978 or before you buy an older home, ask for a lead inspection.
- Get your Child Tested. Even if your young children seem healthy, talk to your healthcare provider about testing them for lead.
- Get the Facts. For more information, contact the Michigan Childhood Lead Poisoning Prevention Program at 888-322-4453 or visit www.michigan.gov/lead or www.michigan.gov/leadsafe.

# # #

From: Wurfel, Sara (GOV)
Sent: Friday, November 06, 2015 4:02 PM
To: Nancy Kaffer - Detroit Free Press
Subject: Follow up

Nancy –

Per our earlier conversation, I'd reiterate our heavy focus on ensuring and letting this task force can do their very important job of reviewing all actions related to Flint water. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Thanks,
SW

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted], mobile
Twitter:@SaraLW

From: Wurfel, Sara (GOV)
Sent: Friday, November 13, 2015 7:29 AM
To: Egan, Paul
Subject: Re: Recall

Part of the Democratic process, Paul - we respect that. The governor is going to stay focused on tackling the issues facing our state and Michiganders with relentless positive action and to keep moving Michigan forward. On Flint water, the governor has outlined a detailed multiple step action plan for both immediate, mid and long term, and appointed a task force doing a very important job of reviewing all actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Sent from my iPhone

> On Nov 13, 2015, at 7:02 AM, Egan, Paul <pegan@freepress.com> wrote:
>
> Good morning Sara I am writing a short advancer on Snyder recall petition Bd of Canvassers takes up today.
> Can you plz give me a response?
> Thanks, Paul
>
>
> Sent from my iPhone

From: Wurfel, Sara (GOV)
Sent: Monday, November 16, 2015 2:03 PM
To: 'Macaluso, Nora'; Murray, David (GOV)
Subject: RE: flint water

Hi there Nora –

There wasn't a release per se, more of as came up with media. But you should be all set on that front (refugee statement), yes? Let us know if more needed.

On Flint water, we haven't been served yet so can't comment on specific details. What would say is that we're focused on moving forward and ensuring public health and clean, safe drinking water. The governor has outlined a detailed multiple step action plan for both immediate, mid and long term. He has also appointed a task force doing a very important job of reviewing all past actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Good and all set? Just let us know if anything more needed at all.

Thanks and best,
SW

From: Macaluso, Nora [mailto:nmacaluso@bna.com]
Sent: Monday, November 16, 2015 8:20 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: flint water

I'm writing today on the suit filed in federal court against the governor and state and local officials. Is there any comment? Deadline is 3:30 p.m.

Also, I missed another release: The one on Syrian immigrants issued over the weekend. Can you (again) make sure I'm on the distribution list for everything you send out?

Thanks …

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Nora Macaluso
Staff Correspondent

Bloomberg BNA

Direct/Mobile [redacted]
nmacaluso@bna.com

From: Wurfel, Sara (GOV)
Sent: Monday, November 16, 2015 2:14 PM
To: 'Ronald Fonger'
Cc: Murray, David (GOV)
Subject: RE: u.s. district court lawsuit concerning flint water

Hi there Ron --

Sure -- can do now.

We haven't been served yet so can't comment on specific details. What would say is that we're focused on moving forward and ensuring public health and clean, safe drinking water. The governor has outlined a detailed multiple step action plan for both immediate, mid and long term. He has also appointed a task force doing a very important job of reviewing all past actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Just let me know if anything more needed at all.

Thanks and best,
SW

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, November 16, 2015 2:05 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: u.s. district court lawsuit concerning flint water

Sara:

Dave Murray said you would be handling any comment on the lawsuit filed in U.S. District Court Friday.
Do you have an estimated time when you will be available or have a comment?
I'm putting the story together now.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Monday, November 16, 2015 2:15 PM
To: 'Dupnack, Jessica'
Subject: RE: Flint Water Class Action

Greetings, Jessica –

Happy to share comment from our end, which is …

You are correct - we haven't been served yet so can't comment on specific details. What would say is that we're focused on moving forward and ensuring public health and clean, safe drinking water. The governor has outlined a detailed multiple step action plan for both immediate, mid and long term. He has also appointed a task force doing a very important job of reviewing all past actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Just let me know if anything more needed at all.

Thanks and best,
SW

From: Dupnack, Jessica [mailto:jessica.dupnack@abc12.com]
Sent: Monday, November 16, 2015 2:13 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Flint Water Class Action

Hello Sara. Jessica here with ABC 12 News.
Working on a story today about a class action suit filed against Gov. Snyder and 13 other officials.
I was wondering if there would be any comment from your end? I understand that the defendants have not been served.

Thanks for your help.

From: Wurfel, Sara (GOV)
Sent: Monday, November 16, 2015 2:17 PM
To: 'Dupnack, Jessica'
Subject: RE: Flint Water Class Action

Of course – though heads up that's probably not going to change much, given what would be pending litigation.

From: Dupnack, Jessica [mailto:jessica.dupnack@abc12.com]
Sent: Monday, November 16, 2015 2:17 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: Flint Water Class Action

Thank you! I may ask for comment tomorrow. Once you've (the office) officially been served.

From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
Sent: Monday, November 16, 2015 2:15 PM
To: Dupnack, Jessica
Subject: RE: Flint Water Class Action

Greetings, Jessica –

Happy to share comment from our end, which is …

You are correct - we haven't been served yet so can't comment on specific details. What would say is that we're focused on moving forward and ensuring public health and clean, safe drinking water. The governor has outlined a detailed multiple step action plan for both immediate, mid and long term. He has also appointed a task force doing a very important job of reviewing all past actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Just let me know if anything more needed at all.

Thanks and best,
SW

From: Dupnack, Jessica [mailto:jessica.dupnack@abc12.com]
Sent: Monday, November 16, 2015 2:13 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Flint Water Class Action

Hello Sara. Jessica here with ABC 12 News.
Working on a story today about a class action suit filed against Gov. Snyder and 13 other officials.
I was wondering if there would be any comment from your end? I understand that the defendants have not been served.

Thanks for your help.

From: Wurfel, Sara (GOV)
Sent: Monday, November 16, 2015 2:18 PM
To: Wurfel, Brad (DEQ); Stanton, Terry A. (Treasury); Sampson, Jeremy (TREASURY); Lasher, Geralyn (DHHS); Minicuci, Angela (DHHS); Eisner, Jennifer (DHHS)
Cc: Murray, David (GOV)
Subject: FW: u.s. district court lawsuit concerning flint water

FYI

From: Wurfel, Sara (GOV)
Sent: Monday, November 16, 2015 2:14 PM
To: 'Ronald Fonger' <RFONGER1@mlive.com>
Cc: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: RE: u.s. district court lawsuit concerning flint water

Hi there Ron --

Sure -- can do now.

We haven't been served yet so can't comment on specific details. What would say is that we're focused on moving forward and ensuring public health and clean, safe drinking water. The governor has outlined a detailed multiple step action plan for both immediate, mid and long term. He has also appointed a task force doing a very important job of reviewing all past actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Just let me know if anything more needed at all.

Thanks and best,
SW

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, November 16, 2015 2:05 PM
To: Wurfels, Sara (GOV) <Wurfels@michigan.gov>
Subject: u.s. district court lawsuit concerning flint water

Sara:

Dave Murray said you would be handling any comment on the lawsuit filed in U.S. District Court Friday.
Do you have an estimated time when you will be available or have a comment?
I'm putting the story together now.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Monday, November 16, 2015 2:35 PM
To: Chris Klaver - Gongwer
Subject: Flint water lawsuit(s)

Hi there Chris –

Understand you were looking for comment on potential/pending Flint lawsuits.

First, we haven't been served yet so can't comment on specific details.

What would say is that we're focused on moving forward and ensuring public health and clean, safe drinking water. The governor has outlined a detailed multiple step action plan for both immediate, mid and long term. He has also appointed a task force doing a very important job of reviewing all past actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Just let me know if anything more needed at all.

Thanks and best,
SW

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

From: Wurfel, Sara (GOV)
Sent: Monday, November 16, 2015 2:35 PM
To: 'Ronald Fonger'
Subject: RE: u.s. district court lawsuit concerning flint water

Yep, both. Thanks, Ron.

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, November 16, 2015 2:34 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: u.s. district court lawsuit concerning flint water

Sara:
Thanks for the response. Does that go for the notice of intent to sue filing (ACLU/NRDC) as well as the U.S. District Court case?

From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
Sent: Monday, November 16, 2015 2:14 PM
To: Ronald Fonger <RFONGER1@mlive.com>
Cc: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: RE: u.s. district court lawsuit concerning flint water

Hi there Ron --

Sure -- can do now.

We haven't been served yet so can't comment on specific details. What would say is that we're focused on moving forward and ensuring public health and clean, safe drinking water. The governor has outlined a detailed multiple step action plan for both immediate, mid and long term. He has also appointed a task force doing a very important job of reviewing all past actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Just let me know if anything more needed at all.

Thanks and best,
SW

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, November 16, 2015 2:05 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: u.s. district court lawsuit concerning flint water

Sara:

Dave Murray said you would be handling any comment on the lawsuit filed in U.S. District Court Friday.

Do you have an estimated time when you will be available or have a comment?
I'm putting the story together now.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Monday, November 16, 2015 3:10 PM
To: 'Ronald Fonger'
Subject: RE: u.s. district court lawsuit concerning flint water

It was really just a transition and not meant for direct attribution but rather the piece about "moving forward ...." – sorry for my shorthand. Either I or we – either context works if you want to use it as direct quote.

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, November 16, 2015 2:40 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: RE: u.s. district court lawsuit concerning flint water

In your second sentence ... did you mean what "we" or "I" would say....?
Thanks

From: Wurfel, Sara (GOV) [mailto:Wurfels@michigan.gov]
Sent: Monday, November 16, 2015 2:14 PM
To: Ronald Fonger <RFONGER1@mlive.com>
Cc: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: RE: u.s. district court lawsuit concerning flint water

Hi there Ron –

Sure – can do now.

We haven't been served yet so can't comment on specific details. What would say is that we're focused on moving forward and ensuring public health and clean, safe drinking water. The governor has outlined a detailed multiple step action plan for both immediate, mid and long term. He has also appointed a task force doing a very important job of reviewing all past actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Just let me know if anything more needed at all.

Thanks and best,
SW

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Monday, November 16, 2015 2:05 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: u.s. district court lawsuit concerning flint water

Sara:

Dave Murray said you would be handling any comment on the lawsuit filed in U.S. District Court Friday.

Do you have an estimated time when you will be available or have a comment?
I'm putting the story together now.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Monday, November 16, 2015 3:41 PM
To: 'Jeremy Berke'; Murray, David (GOV)
Subject: RE: Comment for story regarding Flint water contamination

Greetings, Jeremy –

First, we haven't been served yet so can't comment on specific details.

What would say is that … we're focused on moving forward and ensuring public health and clean, safe drinking water. The governor has outlined a detailed multiple step action plan for both immediate, mid and long term. He has also appointed a task force doing a very important job of reviewing all past actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Just let me know if anything more needed at all.

Thanks and best,
SW

Sara Wurfel, APR
Press Secretary | Executive Office of Governor Rick Snyder
wurfels@michigan.gov
517-335-6397, office
[redacted] mobile
Twitter:@SaraLW

From: Jeremy Berke [mailto:jberke@businessinsider.com]
Sent: Monday, November 16, 2015 2:54 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: Comment for story regarding Flint water contamination

Hello,

I'm a reporter with Business Insider. I'm currently looking into water contamination issues in Flint, as both the NRDC and ACLU released an intent to sue the state and city government over the ongoing lead contamination.

I wanted to give your office a chance to provide any comments you'd like to include with the story.

Best,

Jeremy

--
Jeremy Berke

News Intern, Business Insider
Twitter: @jfberke
(508) 560-3813

From: Wurfel, Sara (GOV)
Sent: Tuesday, November 17, 2015 10:07 AM
To: Wyant, Dan (DEQ); Wurfel, Brad (DEQ)
Subject: FW: request for comment on congressman's letter
Attachments: 111315 Update and Health Fund Request (Snyder).pdf

Calling to touch base on this.

Thanks,
SW

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Tuesday, November 17, 2015 9:53 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: request for comment on congressman's letter

Hi Sara:
I've attached a copy of a letter Congressman Kildee sent to Gov. Snyder last week concerning Flint water issues.
I didn't know if there has been a formal reply and/or if you would want to comment on it.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

DANIEL T. KILDEE
5TH DISTRICT, MICHIGAN

COMMITTEE ON
FINANCIAL SERVICES

SUBCOMMITTEE ON
HOUSING AND INSURANCE

SUBCOMMITTEE ON
MONETARY POLICY AND TRADE

SENIOR WHIP

DEMOCRATIC POLICY AND
COMMUNICATIONS COMMITTEE

Congress of the United States
House of Representatives
Washington, DC 20515

WASHINGTON OFFICE

227 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-3611
(202) 225-6393 (FAX)

DISTRICT OFFICE

111 EAST COURT STREET #3B
FLINT, MI 48502
(810) 238-8627
(810) 238-8658 (FAX)

WWW.DANKILDEE.HOUSE.GOV
/REPDANKILDEE
@REPDANKILDEE

November 13, 2015

Governor Rick Snyder
Executive Office of the Governor
P.O. Box 30013
Lansing, Michigan 48909

Governor Snyder:

I would like to provide you an update with some of the work we are doing in response to your letter on October 2, 2015 letter. I also have three requests of the state that are necessary to provide relief to the victims of the Flint water crisis.

First, Senator Stabenow, Senator Peters and I wrote a letter to the U.S. Environmental Protection Agency (EPA) asking for clarification on whether federal law permits states to use Safe Drinking Water State Revolving Funds (Revolving Funds) to finance the replacement of privately owned lead water service lines (attached). The EPA responded that the Revolving Funds can in fact be used for this purpose. My office immediately notified both your office and the Michigan Department of Environmental Quality of this fact.

Secondly, the three of us also wrote to Secretary Tom Vilsack requesting that the U.S. Department of Agriculture (USDA) provide greater clarification on the availability of "Ready to Feed" formula for recipients of Special Supplemental Nutrition Program for Women, Infants and Children (WIC) in Flint. Additionally, the letter asks to identify resources to improve the nutrition of Flint residents specifically as it relates to lead, because a certain diet can reduce some of the impact of exposure. The USDA is currently reviewing the letter.

Third, I have been working with the EPA on important revisions to the Lead and Copper Rule that would prevent a public health crisis like the one in Flint from happening again in other communities. I will be providing testimony at a meeting of the National Drinking Water Advisory Council next Wednesday, November 18 on what we have learned firsthand in Flint and the necessary improvements to the Lead and Copper Rule.

I will continue to pursue all of these avenues in order to find assistance for the people of Flint. There are, however, additional steps that need to be taken to remediate the damage done to the people of Flint due to the failures at the state government level, alongside the forgiveness of Flint's Revolving Funds loan debt if that becomes available. I urge state and local partners to work in coordination to fulfill the following requests.

- First, I request that the state of Michigan use its Revolving Funds and other state resources such as the rainy day and general funds to repair the damage done to Flint's water distribution system.

Due to the corrosive nature of the water, conservative estimates show there has been hundreds of millions of dollars of damage done to Flint's water distribution system. The damage to the system will increase maintenance costs resulting in higher rates for Flint water users, who already are burdened by the highest water rates in the state. Furthermore, the presence of over 15,000 lead service lines continues to threaten the quality of the water and creates the potential for future lead exposure through drinking water. As stated previously, the EPA has said that using the Revolving Funds for this purpose is allowed under federal law, and I request the state do so.

- Second, I request the state create a fund for ongoing assistance to the people of Flint to respond to the impacts of lead exposure.

The effects of lead are serious and permanent, with especially harmful impacts on young children and those with weakened immune systems. In discussions with health professionals, they have expressed the need for significant investments in the local health system in order to respond to the widespread exposure of lead to the people of Flint, including monitoring of future lead exposure. This fund should include support for, at a minimum, continuous health monitoring, early education programs, nutrition education, support services for children to succeed in school, and continued exposure prevention efforts. The investments we make now to combat the negative impacts of lead exposure will pay dividends in avoided costs in the future.

- Finally, I again ask that the state immediately reverse course and rescind Flint's obligation to provide $2 million for the cost of connecting to the Detroit water system and refund any money the city of Flint has had to pay.

Requiring a financially distressed city and its people to pay for the state's failures is an abdication of clear responsibility by the state. The state-appointed emergency manager was in charge of the city of Flint during the time that the decision to leave the Detroit system was made. The state – not Flint – created this water crisis, and the state needs to pay to fix it. The $2 million Flint spent to reconnect to the Detroit water system could be used for many other essential services in Flint, such as hiring policemen and firefighters, improving schools and maintaining parks.

In addition to state investments, I encourage the state to request assistance from federal agencies. They have extensive experience working with health, education and nutrition systems nationwide and could provide critical resources to state officials. Specifically, the Centers for Disease Control and Prevention has offered resources if the state requests it. I will work to support any efforts for federal assistance the state makes.

I look forward to working with the state and federal governments to not only provide clean drinking water to the people of Flint immediately, but also repair the damage done to the city's water system and give local health professionals the resources they need to combat the long term impacts of lead exposure.

Sincerely,

Dan Kildee
MEMBER OF CONGRESS

Cc:
Senate Republican Leader Arlen Meekhof
Senate Democratic Leader Jim Ananich
Speaker of the House Kevin Cotter
House Democratic Leader Tim Greimel

From: Wurfel, Sara (GOV)
Sent: Tuesday, November 17, 2015 3:31 PM
To: 'Ronald Fonger'
Subject: RE: request for comment on congressman's letter

Importance: High

Sorry for delay, Ron. We've been nonstop with refugee Qs from across the state and country.

My comment on this is that ...

We look forward to continuing work with Congressman Kildee and other officials and stakeholders at the federal, state and local levels to bring ideas and resources to bear to ensure public health in Flint and clean, safe drinking water. And again, we have the multiple step action plan as well as the task force work underway.

Thanks and best,
SW

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Tuesday, November 17, 2015 9:53 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: request for comment on congressman's letter

Hi Sara:
I've attached a copy of a letter Congressman Kildee sent to Gov. Snyder last week concerning Flint water issues.
I didn't know if there has been a formal reply and/or if you would want to comment on it.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Tuesday, November 17, 2015 4:51 PM
To: Wurfel, Brad (DEQ); Murray, David (GOV)
Subject: RE: Flint suit comments?

We got it, no worries. Best for us to cover.

From: Wurfel, Brad (DEQ)
Sent: Tuesday, November 17, 2015 4:43 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Fwd: Flint suit comments?

Got this? Want us to weigh in or no?

Sent from my iPhone

Begin forwarded message:

> **From:** Jacob Kanclerz <jacob@mirsnews.com>
> **Date:** November 17, 2015 at 3:53:16 PM EST
> **To:** "Wurfel, Brad (DEQ)" <wurfelb@michigan.gov>
> **Subject: Flint suit comments?**
>
> Brad,
>
> I just sent the Governor's office a request for comment, but did you guys want to say anything regarding the federal class action suit filed against the DEQ and other parties over the Flint water situation? Let me know if you get a chance today. Thanks!
>
> --
> Jacob Kanclerz
> Reporter, MIRS News
> Office: 517-482-2125
> Cell: [redacted]
> Twitter: @jacobkanclerz

From: Wurfel, Sara (GOV)
Sent: Tuesday, November 17, 2015 5:01 PM
To: Wurfel, Brad (DEQ); Murray, David (GOV)
Subject: RE: request for comment on congressman's letter

Here's how am responding to Ron, FYI.

We look forward to continuing work with Congressman Kildee and other officials and stakeholders at the federal, state and local levels to bring ideas and resources to bear to ensure public health in Flint and clean, safe drinking water. And again, we have the multiple step action plan as well as the task force work underway.

From: Wurfel, Brad (DEQ)
Sent: Tuesday, November 17, 2015 12:55 PM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: RE: request for comment on congressman's letter

1. The Governor's 10-point plan for Flint recognizes the need to address lead service lines. We agree with Congressman Kildee and intend to work with the City of Flint, utilizing MI's Revolving Loan Fund program. We appreciate Congressman Kildee getting clarification from EPA that this money can be used for lead service line replacement. In fact, we've been working with Sen. Ananich and other legislative leaders to get these funds available to perform lead service line replacement.

2. The Governor's action plan addresses lead education and lead exposure. We will continue working with the city to educate its citizens and we will be making our lead exposure data available and take actions necessary to minimize risk to Flint residents from lead.

3. We appreciate the partnership between the state and local government to address the switchover to Detroit water. The State of Michigan, with support from the Legislature, provided $6 million in an agreed-upon plan with the City to contribute half of the necessary funding. Of the $6 million local half, it is important to remember the Mott Foundation provided $4 million. We want to recognize and sustain the partnership.

4. We look forward to the congressman's continued leadership to deliver federal resources to this issue.

From: Wurfel, Sara (GOV)
Sent: Tuesday, November 17, 2015 10:07 AM
To: Wyant, Dan (DEQ); Wurfel, Brad (DEQ)
Subject: FW: request for comment on congressman's letter

Calling to touch base on this.

Thanks,

SW

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Tuesday, November 17, 2015 9:53 AM
To: Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: request for comment on congressman's letter

Hi Sara:
I've attached a copy of a letter Congressman Kildee sent to Gov. Snyder last week concerning Flint water issues.
I didn't know if there has been a formal reply and/or if you would want to comment on it.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Sara (GOV)
Sent: Tuesday, November 17, 2015 5:56 PM
To: 'Jacob Kanclerz'; Murray, David (GOV)
Subject: RE: Flint suit comments

Hi there Jacob –

Sure- and to be clear, we still haven't been served yet so can't comment on specific details.

What would say is that we're focused on moving forward and ensuring public health and clean, safe drinking water. The governor has outlined a detailed multiple step action plan for both immediate, mid and long term. He has also appointed a task force doing a very important job of reviewing all past actions. They are a bipartisan group of people of the highest integrity, experts in their fields and widely respected who are going to do a very thorough, objective review.

Just let me know if anything more needed at all. This is for comment on behalf of Governor and rest of our administration too.

Thanks and best,
SW

From: Jacob Kanclerz [mailto:jacob@mirsnews.com]
Sent: Tuesday, November 17, 2015 3:52 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>
Subject: Flint suit comments

Dave and Sara,

Good afternoon! Would you guys mind sending me your statement on the possible federal class action suit filed against the Governor and others regarding the Flint water situation in case we end up doing something with it? Thank you very much.

--
Jacob Kanclerz
Reporter, MIRS News
Office: 517-482-2125
Cell: [redacted]
Twitter: @jacobkanclerz

From: Wurfel, Sara (GOV)
Sent: Friday, November 20, 2015 9:35 AM
To: Egan, Paul
Cc: Murray, David (GOV)
Subject: Re: Flint water

Covered this issue previously with Nancy, Paul, as has Terry. Not sure what's new or different here at all, but will be happy to try and help.

The chief mentioned this am you reached out and asked me to cover.

Am with the governor at events this first part of today, but should be able to call about Noon or just after. Work for you?

Sara Wurfel
Press Secretary | Executive Office of Governor Rick Snyder

Sent from my iPhone

On Nov 20, 2015, at 8:43 AM, Egan, Paul <pegan@freepress.com> wrote:

> Good morning, Sara: I sent the e-mail below to Dennis on Thursday but I haven't received a response. I am following up with you because Nancy Kaffer tells me she had raised the issue of the March 25, 2013 phone call with you earlier, though the last I heard from Nancy about it, she had not received a response.
> We are running a story on the weekend so I would very much appreciate some answers today.
> Did Dennis Muchmore, through his consultation with former Treasurer Dillon on the day of the Flint City Council meeting, sign off on the switch to KWA, and did Muchmore inform and get sign-off from Gov. Snyder in doing so?
> Thanks, Paul
> cc Dave Murray
>
> ---
>
> **From:** Egan, Paul
> **Sent:** Thursday, November 19, 2015 11:17 AM
> **To:** 'muchmored@michigan.gov'
> **Subject:** Flint water
>
> Hi Dennis: Some time ago I obtained former Treasurer Andy Dillon's appointment calendar, under FOIA. On March 25, 2013, at 5 p.m., it lists: "Call with Dennis Muchmore regarding Flint Water Supply Alternatives."
> Later that evening, the city council of Flint, which was under a state-appointed emergency manager, voted to switch its water supply from the city of Detroit to a new Karegnondi Water Authority.
> Can you please call me to discuss your/the state's role in that decision?
> Also, for another time, maybe in December, would love to do an exit interview before you leave your current post.
> Thanks, Paul

o. 517-372-8660
c. [redacted]

From: Wurfel, Sara (GOV)
Sent: Friday, November 20, 2015 10:01 AM
To: Murray, David (GOV)
Subject: Re: Flint blood level data

Talked with Gov about this briefly. He def indicated preference waiting until early next week to ensure best messaging and outreach.

They took this long - let's get this right.

Sent from my iPhone

On Nov 20, 2015, at 9:41 AM, Eisner, Jennifer (DHHS) <EisnerJ@michigan.gov> wrote:

> We're talking to the director to and will give you a call soon.
>
> Jennifer
>
> ---
>
> **From:** Murray, David (GOV)
> **Sent:** Friday, November 20, 2015 9:34:35 AM
> **To:** Eisner, Jennifer (DHHS); Wurfel, Sara (GOV); Brown, Jessica (GOV); Kennedy, Jordan (GOV); Heaton, Anna (GOV); Biehl, Laura (GOV); Agen, Jarrod (GOV)
> **Cc:** Wurfel, Brad (DEQ); Tommasulo, Karen (DEQ); Lasher, Geralyn (DHHS); Minicuci, Angela (DHHS); Hertel, Elizabeth (DHHS)
> **Subject:** RE: Flint blood level data
>
> I don't think this should happen today at all. Governor is at an important event in Southeast Michigan this morning, and I think we need some direction from him and others on this issue.
>
> ---
>
> **From:** Eisner, Jennifer (DHHS)
> **Sent:** Friday, November 20, 2015 9:30 AM
> **To:** Murray, David (GOV) <MurrayD1@michigan.gov>; Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>; Kennedy, Jordan (GOV) <KennedyJ4@michigan.gov>; Heaton, Anna (GOV) <HeatonA@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>
> **Cc:** Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Tommasulo, Karen (DEQ) <TommasuloK@michigan.gov>; Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>; Hertel, Elizabeth (DHHS) <HertelE@michigan.gov>
> **Subject:** Re: Flint blood level data
>
> Thanks Dave. We're talking with population health now and will send around an updated version as soon as possible.
>
> Will be in touch as soon re: timeline but the notifications are not happening right at 9:30.
>
> Best,
> Jennifer

From: Murray, David (GOV)
Sent: Thursday, November 19, 2015 6:24:48 PM
To: Eisner, Jennifer (DHHS); Wurfel, Sara (GOV); Brown, Jessica (GOV); Kennedy, Jordan (GOV); Heaton, Anna (GOV); Biehl, Laura (GOV); Agen, Jarrod (GOV)
Cc: Wurfel, Brad (DEQ); Tommasulo, Karen (DEQ); Lasher, Geralyn (DHHS); Minicuci, Angela (DHHS)
Subject: Flint blood level data

Good evening, MDHHS friends,

Here are suggested changes to the press release. I think it's vitally important to have our "people first" approach, and be very up front about the results. I also think it's important to show up high what we will do with this data. Please consider the changes. I also think it's worth a conversation about whether we want to release this on a Friday morning. This is a challenging situation to be sure, but I think these results are fairly encouraging considering some of the heated rhetoric on this issue.

Thank you,

Dave

FOR IMMEDIATE RELEASE CONTACT: Jennifer Eisner
DRAFT
(517) 241-2112

MDHHS releases October data outlining blood lead levels in Flint
Results show 24 of 963 people tested had elevated levels

LANSING, Mich. – Blood lead level testing results released today revealed that 24 of 963 adults and children tested in Flint in October had elevated levels, according to the Michigan Department of Health and Human Services.

MDHHS is working closely with the Genesee County Health Department to reach out to families testing with higher levels and help them reduce their exposure to lead sources.

Information was gathered from tests administered citywide to 963 children and adults between October 1 and October 30. Eighteen people age 17 or younger had elevated blood lead levels. Six adults over the age 18 were identified with elevated blood lead levels.

The report is intended to inform residents about blood lead level testing efforts in Flint and provide cumulative total numbers.

"Our goal is to help families reduce their exposure to lead sources," said Dr. Eden Wells, chief medical executive with the MDHHS. "We have made

progress in testing and identifying those with elevated blood lead levels, and the department will continue to work closely with county health department to reach these families. We will update these numbers on a regular basis and remain diligent in our ongoing outreach and education."

The data in the report include the total number of tests conducted and the total number of elevated blood lead levels greater than 5 micrograms per deciliter, and captures both capillary and venous blood tests. People who have had multiple tests are counted only once. The full report is posted online at www.michigan.gov/flintwater and will be updated as more data becomes available.

The testing is part of the state's action plan to address health concerns related to Flint's water infrastructure.

Last month, MDHHS collaborated with the county health department and local partners to distribute educational resources and informational letter to Flint parents regarding lead testing. GCHD nursing staff are conducting direct outreach to families when an elevated blood lead level has been detected, serving as an important resources by addressing questions and concerns, providing information, and meeting them in their home environment.

MDHHS continues to provide free water filters and replacement cartridges to Flint residents at four locations including the MDHHS Flint offices and the Genesee County Community Action Resource Department. For a full list of locations and hours of distribution, visit www.michigan.gov/flintwater.

To help residents properly install water filters, and to demonstrate how to replace the original when it expires, MDHHS has created an instructional on the MDHHS YouTube channel. For additional updates on Flint water including updates on blood lead levels and testing results, visit www.michigan.gov/flintwater.

# # #

From: Eisner, Jennifer (DHHS)
Sent: Thursday, November 19, 2015 3:07 PM
To: Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>; Kennedy, Jordan (GOV) <KennedyJ4@michigan.gov>
Cc: Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Tommasulo, Karen (DEQ) <TommasuloK@michigan.gov>; Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>
Subject: Flint EBL Data

Good afternoon:

Attached, please find the blood lead level test results for Flint zip codes 48501-48507, as well as a corresponding press release and talking points. With your approval and edits, we are planning to notify

external partners tomorrow at 9:30 a.m. then post the report on www.michigan.gov/flintwater and issue the press release at 10 a.m.

Please let us know if you have any questions or concerns.

Thanks and best,

Jennifer Eisner
Public Information Officer
Michigan Department of Health and Human Services
Office: 517-241-2112 or EisnerJ@michigan.gov
Cell: [redacted]

From: Wurfel, Sara (GOV)
Sent: Friday, November 20, 2015 12:46 PM
To: Egan, Paul
Subject: Re: Flint water

Got pulled onto a conference call on my way back from Detroit, Paul. Hopefully freed up no later than 2 PM. I will call ASAP

Sent from my iPhone

> On Nov 20, 2015, at 9:45 AM, Egan, Paul <pegan@freepress.com> wrote:
>
> Ok thanks
>
> Sent from my iPhone
>
>> On Nov 20, 2015, at 9:34 AM, Wurfel, Sara (GOV) <Wurfels@michigan.gov> wrote:
>>
>> Covered this issue previously with Nancy, Paul, as has Terry. Not sure what's new or different here at all, but will be happy to try and help.
>>
>> The chief mentioned this am you reached out and asked me to cover.
>>
>> Am with the governor at events this first part of today, but should be able to call about Noon or just after. Work for you?
>>
>> Sara Wurfel
>> Press Secretary | Executive Office of Governor Rick Snyder
>>
>> Sent from my iPhone
>>
>> On Nov 20, 2015, at 8:43 AM, Egan, Paul <pegan@freepress.com<mailto:pegan@freepress.com>> wrote:
>>
>> Good morning, Sara: I sent the e-mail below to Dennis on Thursday but I haven't received a response. I am following up with you because Nancy Kaffer tells me she had raised the issue of the March 25, 2013 phone call with you earlier, though the last I heard from Nancy about it, she had not received a response.
>> We are running a story on the weekend so I would very much appreciate some answers today.
>> Did Dennis Muchmore, through his consultation with former Treasurer Dillon on the day of the Flint City Council meeting, sign off on the switch to KWA, and did Muchmore inform and get sign-off from Gov. Snyder in doing so?
>> Thanks, Paul
>> cc Dave Murray
>>
>>
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>> Sent: Thursday, November 19, 2015 11:17 AM
>> To: 'muchmored@michigan.gov<mailto:muchmored@michigan.gov>'
>> Subject: Flint water

>>
>> Hi Dennis: Some time ago I obtained former Treasurer Andy Dillon's appointment calendar, under FOIA.
>> On March 25, 2013, at 5 p.m., it lists: "Call with Dennis Muchmore regarding Flint Water Supply Alternatives."
>> Later that evening, the city council of Flint, which was under a state-appointed emergency manager, voted to switch its water supply from the city of Detroit to a new Karegnondi Water Authority.
>> Can you please call me to discuss your/the state's role in that decision?
>> Also, for another time, maybe in December, would love to do an exit interview before you leave your current post.
>> Thanks, Paul
>> o. 517-372-8660
>> c. [redacted]
>>

From: Wurfel, Sara (GOV)
Sent: Sunday, November 22, 2015 9:47 PM
To: Murray, David (GOV); Biehl, Laura (GOV); Bedan, Morgan (GOV)
Subject: Fwd: Questions
Attachments: image001.png

Please see below - for tomorrow's Steve Hood interview.

Sent from my iPhone

Begin forwarded message:

> **From:** Steve Hood <steve@roninamerica.net>
> **Date:** November 22, 2015 at 6:48:07 PM EST
> **To:** <wurfels@michigan.gov>
> **Subject: Questions**
>
> Sara, there are only two questions for tomorrow's interview:
>
> Question 1: Please tell us about the DPS legislation that is being proposed and how it will help better educate the Detroit Students.
>
> Question 2: How are you going to fix Flint's water system problems and how will you keep a situation like this from happening again.
> ***Please note, I am not going after the "why" of Flint. I just want to hear the solution.***

The linked image cannot be displayed. The file may have been moved, renamed, or deleted. Verify that the link points to the correct file and location.
RONIN AMERICA
14450 SCRIPPS
DETROIT, MI 48215
EMAIL:STEVE@RONINAMERICA.NET
Ph:313-737-9311

From: Wurfel, Sara (GOV)
Sent: Sunday, November 22, 2015 9:58 PM
To: Murray, David (GOV)
Subject: Re: Questions

I will fill you in tomorrow am on what else to likely expect too.

And this really won't be two Qs - more like two areas that will have several related follow ups Qs - whatever can fit into 20 mins.

Sent from my iPhone

On Nov 22, 2015, at 9:47 PM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:

> Thanks! I'll brief the G prior.
>
> ---
>
> **From:** Wurfel, Sara (GOV)
> **Sent:** Sunday, November 22, 2015 9:47 PM
> **To:** Murray, David (GOV) <MurrayD1@michigan.gov>; Biehl, Laura (GOV) <BiehlL@michigan.gov>; Bedan, Morgan (GOV) <BedanM@michigan.gov>
> **Subject:** Fwd: Questions
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> Sent from my iPhone
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> > **To:** <wurfels@michigan.gov>
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> >
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> > ***Please note, I am not going after the "why" of Flint. I just want to hear the solution.***

RONIN AMERICA
14450 SCRIPPS
DETROIT, MI 48215
EMAIL:STEVE@RONINAMERICA.NET
Ph:313-737-9311

Subject:	Call with Dennis Muchmore regarding Flint Water Supply Alternatives
Location:	Dial in number [redacted], access [redacted], Brom to host
Start:	Mon 3/25/2013 5:00 PM
End:	Mon 3/25/2013 5:30 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Hichez, Amy (Treasury)
Required Attendees:	Dillon, Andy (Treasury); Stibitz, Brom (Treasury); Muchmore, Dennis (GOV)
Optional Attendees:	Hichez, Amy (Treasury); Cousineau, Sara (Treasury); Wisniewski, Wendy (GOV)

Confirmed with Wendy on 3/20/13.

Subject: --Call regarding KWA
Location: dial in [redacted], Access [redacted]--brom to host

Start: Fri 3/29/2013 11:00 AM
End: Fri 3/29/2013 11:30 AM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Hichez, Amy (Treasury)

From: Hollins, Harvey (GOV)
Sent: Sunday, February 15, 2015 10:46 PM
To: Saxton, Thomas (Treasury); Baird, Richard (GOV); Muchmore, Dennis (GOV)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Re: Flint

Tom,
Thanks. I'd like to get such a table out to the Flint stakeholders; however, before doing so, the table probably needs to be modified to better reflect the comparison between Flint River and DWSD.

--HH

From: Saxton, Thomas (Treasury)
Sent: Friday, February 13, 2015 8:10 PM
To: Baird, Richard (GOV); Muchmore, Dennis (GOV); Hollins, Harvey (GOV)
Cc: Workman, Wayne (TREASURY)
Subject: Re: Re: Flint

You may have already seen this (below) blurb from MLive. Also, I had a call from Jerry A. He indicated Veolia is coming to the same conclusion that it may involve tweaking of the process vs some major undertaking. We will know more next week.

I have also attached a table Wayne's & Jerry's staff put together. My sense is there is still this thought that hooking back up to DWSD is cost neutral or nearly so. Hopefully this table shows that is not the case. The info is consistent with we sent you the other day i.e., there is an estimated 30% rate impact.

FLINT, MI – A water quality expert who has spent years working with environmentalist Erin Brockovich is expected to speak at two events in Flint Saturday, Feb. 14.
Robert W. Bowcock, founder of Integrated Resource Management, met with Mayor Dayne Walling, Councilman Wantwaz Davis and others Friday, Feb. 13.
Bowcock said earlier this week that he believes small treatment and distribution adjustments could help fix some of Flint's water quality problems. He toured the city's water treatment plant Friday.
Walling declined to comment on his conversation with Bowcock, but city Councilman Eric Mays said he is anxious to hear his assessment and recommendations.

Davis said Bowcock was straightforward in giving his opinion that the city can cut back on some of the chemicals being used to treat water.

City spokesman Jason Lorenz issued a statement, saying, "The city of Flint honored a request for a tour of its water treatment plant submitted by Mr. Bowcock, as it has done with individuals and groups in the past.

"(Director of Public Works) Director Howard Croft and F-1 Licensed Treatment Operator Mike Glasgow guided the tour and answered all of Mr. Bowcock's questions. Tours of the Water Treatment Plant can be arranged by appointment for interested groups by calling 810-787-6537."

Bowcock is scheduled to join in a march for water quality through downtown Flint, which is planned to begin at 1 p.m. Saturday at Flint City Hall, 1101 S. Saginaw St., and end at The Durant.

Bowcock is also scheduled to speak at a forum at the Saints of God Church, 2200 Forest Hill Ave., Flint, from 3-4:15 p.m.

Brockovich, portrayed by Julia Roberts in a 2000 movie about her fight over the pollution of a California town, has been speaking out on Facebook about Flint's water issues for several weeks. Today, she posted a photo of Bowcock, Davis and march organizer Melissa Mays inside the Flint water plant, saying she was "so honored this community would seek my help ... and I am glad I could send Bob to get it done."

In addition to customer complaints about the price and quality of the water, there were several boil water advisories in Flint in 2014 and the city was found in violation of the Safe Drinking Water Act for excess total trihalomethanes in the water supply last year.

The city began using the Flint River as its source of drinking water in April after 50 years of handling only the distribution of already-treated Lake Huron water purchased from the Detroit Water and Sewerage Department.

Since that time, some citizens and members of the City Council have advocated abandoning the use of the river and purchasing lake water from the Detroit until the Karegnondi Water Authority pipeline is complete.

The city and Genesee County are partners in the KWA.

.

Real Estate

From: Baird, Richard (GOV)
Sent: Thursday, February 12, 2015 11:34 PM
To: Muchmore, Dennis (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: Fwd: Re: Flint

Sent from my Verizon Wireless 4G LTE DROID
---------- Forwarded message ----------
From: Robert Daddow <daddowr@oakgov.com>

Date: Feb 12, 2015 11:32 PM
Subject: Re: Flint
To: "Baird, Richard (GOV)" <bairdr@michigan.gov>
Cc:

Should not have thought politically but financially in the first place. This is very doable. We need to chat. Rjd

On Feb 12, 2015, at 10:32 PM, Bart Foster <bfoster@fostergroupllc.com> wrote:

> Actually, my quick take is about 8%.
>
> Some background:
> When Flint left, the annual revenue profile for the Water System was initially reduced by $12.5 million, However, we immediately recalculated the rate for Genesee County (recognizing their higher demands), to effectively "claw back" about $2 million of the reduction, so the net Flint impact is ~ $10.5 million, or just under 2.5% of the (reduced) Water System rate revenue. Assuming that same amount could be replaced, and all else being equal, the "system rate increase" could be reduced by about 3 percent, with a bit more of the reduction occurring in the suburban wholesale rate structure. Safe to say that (again, absent any other changes) the average suburban water rate increase would be closer to 8 percent compared to the current 11.1%.
>
> Hope this helps . . .
> --
> Bart Foster
> President
> THE FOSTER GROUP
> (913) 345-1410
> (913) 345-1640 fax
> [redacted] cell
> bfoster@fostergroupllc.com <mailto:bfoster@fostergroupllc.com>
> *Please note that the information in this message along with any attachments are intended for the exclusive use of the addressee and may contain confidential or privileged information. If you are not the intended recipient, please do not forward, copy or print the message or its attachments: notify me at the above address and delete this message and any attachments.*
> *Thank you.*
>
> On Feb 12, 2015, at 7:02 PM, Bart Foster <bfoster@fostergroupllc.com> wrote:
>
> Bob - in transit but will review and reply this evening.
>
> Sent from my iPhone
>
> On Feb 12, 2015, at 3:44 PM, Daddow, Robert <daddowr@oakgov.com> wrote:
>
> > Nikki / Bart – don't need a hard and fast number on this. However, it would seem to me that in a fixed cost system such as water, if Flint were to be hooked up again at the $847K / month cited in Ms. McCormick's January 12th memorandum and after the release of the rates yesterday, bringing Flint back would – on a marginal cost basis –

serve to mitigate the wholesale (suburban) customer rate increase of 11.1% cited in yesterday's presentation. Without going into a whole lot of detailed calculations (unless necessary), what would the impact of the inclusion of Flint starting say on July 1, 2015 (hypothetical date) be on the rate increase presently now in the public? A revised increase of what – 10.6% - looking for a high level sensitivity analysis here. Can you help? RJD

From: Muchmore, Dennis (GOV)
Sent: Friday, March 29, 2013 8:02 AM
To: Hichez, Amy (Treasury)
Subject: Accepted: --Call regarding KWA

From: Muchmore, Dennis (GOV)
Sent: Friday, March 29, 2013 9:40 AM
To: Dillon, Andy (Treasury)
Subject: Re: KWA

Wow, what happened? I thought we were going the other way.

On Mar 28, 2013, at 6:17 PM, "Dillon, Andy (Treasury)" <DillonA2@michigan.gov> wrote:

> Governor, based upon today's presentations to the DEQ by the City of Flint, KWA and the engineering firm (Tucker Young) Treasury hired to vet the options as to whether Flint should stay with DWSD or join KWA, I am recommending we support the City of Flint's decision to join KWA. The City's EM, Mayor and City Council all support this decision. Dan Wyant likewise concurs and will confirm via email.
>
> We have a briefing call tomorrow morning with Dennis and John to provide more background as to why we reached this conclusion. Flint's EM wants to sign the resolution asap as the project is moving forward with or without them and their participation affects the design and the construction season is upon them.
>
> I assume DWSD will make a last ditch effort to save the customer but I will not advise them of my recommendation until we brief Dennis and John.
>
> Regards,
>
> Andy
>
>
> Sent from my iPad

From: Muchmore, Dennis (GOV)
Sent: Friday, March 29, 2013 3:10 PM
To: Dillon, Andy (Treasury)
Subject: Flint

How does Kurtz propose to protect them from cost overruns? Did they get a low ball price and how do we keep it from ballooning? Finally, what does that do to the sale value of DWSD?

Sent from my iPhone

From: Muchmore, Dennis (GOV)
Sent: Tuesday, April 16, 2013 6:12 PM
To: Dillon, Andy (Treasury); Stibitz, Brom (Treasury); Headen, Frederick (Treasury); Saxton, Thomas (Treasury)
Cc: Roberts, John (GOV)
Subject: RE: Flint/KWA

I thought we had settled all these questions. If so, we need to answer his email with an explanation.

From: Dillon, Andy (Treasury)
Sent: Monday, April 15, 2013 11:11 AM
To: Stibitz, Brom (Treasury); Headen, Frederick (Treasury); Saxton, Thomas (Treasury)
Cc: Muchmore, Dennis (GOV); Roberts, John (GOV)
Subject: Fwd: Flint/KWA

I don't know who Fred the Engineer is.

I spoke to Brooks Patterson Sat night. He won't get in middle of this despite Det News story.

I think we need to understand if the legacy liability issue raised twice now presents a real risk to Flint. Also, Fred were you able to sort thru rate issue we discussed?

Thanks.

Andy

Sent from my iPhone

Begin forwarded message:

> **From:** fredtheengineer <[redacted]>
> **Date:** April 15, 2013, 10:46:35 AM EDT
> **To:** "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>
> **Subject: Flint/KWA**
>
> Dear Mr. Dillon:
> The report produced, at your direction, by TYJT, indicated the most economical option for Flint water is to maintain a contract with DWSD. The KWA option will cost more money. Since some of the funds for the KWA solution will come from State grants and State Revolving Fund loans, that solution will cost me more money in the form of taxes. The best solution from the economic and engineering perspective is DWSD. A purely political decision that ignores economics is not in the public interest.
> Sincerely,
>
> Fred W. Barnes, PE
>
> Sent from my iPhone

From: Stibitz, Brom (Treasury)
Sent: Friday, April 26, 2013 4:51 PM
To: Muchmore, Dennis (GOV); Roberts, John (GOV); Dillon, Andy (Treasury)
Cc: Buhs, Caleb (GOV); Wurfel, Sara (GOV); Stanton, Terry A. (Treasury)
Subject: Flint/DWSD
Attachments: Kevyn Orr - April 26, 2013.pdf

Ed Kurtz and Kevyn Orr spoke this afternoon. Ed indicated that Flint will not accept the last offer from DWSD. His formal letter is attached.

I spoke with both (separately) after the call. They both indicated that they had a good conversation, and that they sincerely look forward to working with the other in good faith over the next couple years.

Kevyn indicated that he would follow up with Sue McCormack, and that his direction will be that there be no more talking to the press about the issue. Ed plans to stay silent on the deal until Monday, at which time he will address the issue in a matter of fact matter, and stay away from any divisive language regarding the issue.

Brom Stibitz
Senior Policy Advisor
Michigan Department of Treasury
517-373-3223
stibitzb@michigan.gov

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
EDWARD J. KURTZ

ELECTRONIC LETTER

April 26, 2013

Mr. Kevyn Orr
Emergency Manager
Coleman A. Young Municipal Center
2 Woodward Avenue, Suite 1126
Detroit, MI 48226

RE: DWSD Offer Evaluation

Dear Mr. Orr:

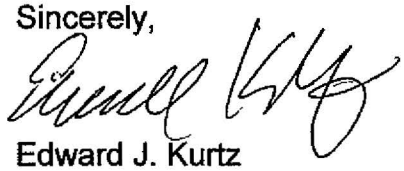
DWSD's offer of a Public/Public Partnership appears on the surface to offer significant cost of water savings, particularly in the near-term. However, further analysis exposes several flaws and weaknesses with the offer that reduce any potential appeal. First, the offer continues to use a grossly inaccurate estimate of the KWA operating and capital costs over the next thirty years. This one estimate is off by at least $800 million and perhaps by as much as $1 billion over that timeframe. And since DWSD claims "total savings to the Flint region are over $900 million", they have relied on this flawed estimate of KWA cost to make this claim. This offer also relies on a projection based on very little capital expenditures, no repairs on a system that is past its life expectancy, and annual rate increases of 4.7% over the next 30 years.

Secondly, and of much greater concern to Flint and GCDC, DWSD's offer of partnership would not so much foster a true collaborative relationship, but instead contractually transfers significant liability and risk for the next thirty years. DWSD's offer states the contract "would reflect more input into and control over system investments and cost variables." Unfortunately, these future investments and cost variables are not contained in the DWSD cost estimates. DWSD has included a fixed monthly charge to recover allocated capital revenue requirements, but this number is largely for past expenditures and debt costs, and does not include the significant future capital costs which will be required to maintain their nearly 50 year-old system. Once again quoting from the

DWSD April 24th offer letter under the Rate Increase Guarantee section – "DWSD proposes a guarantee that the capital portion of the Lake Huron System rate structure (the fixed monthly charge) will not increase for the life of the contract, unless additional capital investment is made in current and future Lake Huron System facilities." No one disputes that additional capital costs will be required that will total in the millions of dollars.

The DWSD offer is able to appear to offer savings on the surface since they have offloaded much of the above future capital costs. But to do so, DWSD has had to gloss over or simply ignore these large future expenditures. If these unaccounted for capital costs were to be calculated and added to the 30 year Flint and GCDC cost of water estimates, the DWSD offer becomes one in which the savings swing far to the advantage of the Karegnondi Water Authority.

Sincerely,



Edward J. Kurtz

ATTACHMENT 1

This offer has more risk involved than previous proposals. KWA would be responsible for between 20% and 100% of the repair costs on the pipeline and related assets from Port Huron

The numbers in the offer do not make sense. DWSD indicates savings of over $900 million while KWA's total cost over 30 years is less than $650 million.

Offer is based on very little capital improvements, no repairs and a 4.7% annual increase over the life of the contract.

There are no rate guarantees after the first year for capital, O & M or consumption.

KWA would be responsible for redundancy at a cost of $94.68 million per DWSD's estimate.

Does not guarantee a rate structure if system regionalizes or DWSD regionalizes, or Detroit enters bankruptcy.

Flint and Genesee County could have a connected waste/water system that serves all or part of five counties.

The potential for further consolidation of services between the city and the county i.e...water, wastewater, 911, etc,

This partnership will give Flint ownership of its own water supply system with real representation on its board of directors, making all treatment and delivery system decisions.

Flint's participation allows them to utilize its own water treatment facility that it has invested 50 million into and only currently exercises four days per year.

The investment gives us a new pipeline with a life expectancy of 75 years, as well as a 2nd product, untreated water. Under DWSD we would have no ownership after the end of the contract, and a new pipeline would still need to be built.

A 30 year contract with DWSD keeps us on a system that is 48 years old with a design life of 75 years. There will be necessary major investments or replacement costs that are not accounted for in this DWSD proposal.

KWA guarantees its capitol rate for 25 years. The capitol rate is 90 % of the total costs.

The commodity charge of $1.30 per mcf is mainly driven by energy costs. The whole operation will employ 5-7 people.

A thirty year contract with DWSD will lock Flint into hundreds of employees, labor costs and legacy costs.

The combination of low financing, labor and material make this the optimal time for this investment. At our meeting with the governor on April 19th Detroit acknowledged a second pipeline had to be built.

KWA could be used as a backup emergency supply for the existing 48 year old pipeline.

It brings a total economic package to our community i.e. We have the I-69 corridor, I-75 interchange, the rail system connected to Port Huron, and one of the busiest airports in the state. Owning our own water supply completes that package and keeps $25 million in our community.

Mr. Fausone's continued insistence on a 12 month timeline to calculate the termination fees leaves a question mark on the costs.

Construction Costs

- Rowe/AECOM/J & H $272,000,000
- TYJT $357,000,000

  Include: 10% bond coverage (dispelled)

  30% additional engineering (dispelled)

  Back-up power (dispelled)

- DWSD Starts at: $357,000,000 and adds:

  $134,630,000 for bond sizing

  $11,074,500 for bond sale cost

  For a total of: $503,274,500

  Plus need to collect $6,984,000 per year extra for bond coverage (20%)

  Now we need:

  20% bond coverage

  30% additional engineering

  38% bond sizing

We dispelled TYJT numbers; now DWSD starts with those numbers and adds more They add the same costs to Flint and GCDC construction costs (baseline figures and assumptions – KWA)

Baseline Figures and Assumptions - KWA Scenario

	DWSD Water Rate Structure			
	Fixed	Standby	Commodity	
2014	738,006	#N/A	13.01	Service ceases after 2016

Total Water Service Costs for Flint / Genesee County Drain Commission

Costs of Current Facilities / Operations

Same as DWSD scenario

Costs of Future Facilities / Operations

Financing Costs for New Projects	Flint WTP Improvements	GCDC WTP and Other	KWA System (a)
Project Cost	7,100,000	110,038,554	357,578,060
Bond Sizing Factor	37.65%	37.65%	37.65%
Additional Bond Proceeds Needed	2,670,000	41,430,000	134,630,000
Bond Sale Size	9,800,000	151,500,000	492,200,000
Bond Issuance Expenses - %	2.25%	2.25%	2.25%
Bond Issuance Expenses	220,500	3,408,800	11,074,500
Finance Rate	5.00%	5.00%	5.00%
Finance Term	25	25	25
Bond Reserve Size - %	10.00%	10.00%	10.00%
Bond Reserve Size	980,000	15,150,000	49,220,000
Capitalized Interest term - years	3	3	3
Capitalized Interest	1,470,000	22,725,000	73,830,000
Net Bond Proceeds	7,129,500	110,216,200	358,075,500
Annual Debt Service Payment	695,300	10,749,300	34,922,800
Debt Service Coverage Requirement	120.00%	120.00%	120.00%
Annual Debt Service Coverage	139,100	2,149,900	6,984,600
Replacement?	144,900	2,251,600	(b)
Total Capital Financing Revenue Req't	979,300	15,150,800	41,907,400
Operating Cost Estimate Starting in FY 2017	8,270,000	1,819,900	(c)

(a) excludes raw water reservoir
(b) assume no annual replacement required for pipeline
(c) $1.30 per Mcf inflated to 2017

From: Scorsone, Eric <[redacted]>
Sent: Friday, April 19, 2013 8:23 AM
To: Muchmore, Dennis (GOV)
Cc: Roberts, John (GOV); Rustem, William (GOV)
Subject: Re: Detroit

Dennis, Bill and John

For what it is worth, I would look at having flint spilt off the water system into some kind of regional authority and separate the finances from the general city if you are going to move forward with kiragani. The city has a propensity to use the water system as a cash cow and it will help them avoid that problem in the future.

Thanks

Eric

Dr. Eric Scorsone
Michigan State University

On Apr 17, 2013, at 5:44 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

> Anytime
>
> -----Original Message-----
> From: Scorsone, Eric [redacted]
> Sent: Wednesday, April 17, 2013 4:24 PM
> To: Roberts, John (GOV); Muchmore, Dennis (GOV); Rustem, William (GOV)
> Subject: Detroit
>
> Good Afternoon,
>
> If you think it makes sense, it might be worthwhile to get together and discuss the Orr situation and how you want me to interact with him. I have been working with Ernst and Young in Detroit for the last month or two on restructuring issues.
>
> Thanks
>
> Eric
>
> Dr. Eric Scorsone
> Faculty Member and Workgroup Leader
> Department of Agricultural, Food and Resource Economics and MSU Extension Michigan State University
> 202 Agriculture Hall
> East Lansing, MI 48824-1039
>
> [redacted]
>
> _____

> From: Scorsone, Eric
> Sent: Tuesday, January 22, 2013 7:50 PM
> To: Roberts, John (GOV); muchmored@michigan.gov; Rustem, William (GOV)
> Subject: bankruptcy
>
> Good Evening
>
>
>
> It looks like we are all set with the fee situation. I wanted to let you know that Detroit President Charles Pugh asked me to talk his staff about bankruptcy in the near future. I did not mention anything about the fact that we are talking. I am working with the FAB and the city on the revenue consensus conference. Please let me know if you need anything.
>
>
>
> Regards,
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>
>
> Eric
>
>
>
> Dr. Eric Scorsone
> Faculty Member and Workgroup Leader
> Department of Agricultural, Food and Resource Economics and MSU Extension Michigan State University
> 202 Agriculture Hall
> East Lansing, MI 48824-1039
>
> [redacted]
> [redacted]

From: Scorsone, Eric <[redacted]>
Sent: Tuesday, April 30, 2013 6:36 AM
To: Muchmore, Dennis (GOV)
Cc: Rustem, William (GOV)
Subject: RE: Detroit

Dennis and Bill,

I know we were going to try and set up a meeting with Kevyn Orr and I know you had also mentioned a meeting perhaps this week with some of the advisors. I just wanted to check in about this weeks meeting if it still happening and the details if so.

Thanks

Eric

Dr. Eric Scorsone
Faculty Member and Workgroup Leader
Department of Agricultural, Food and Resource Economics and MSU Extension Michigan State University
202 Agriculture Hall
East Lansing, MI 48824-1039

[redacted]

From: Scorsone, Eric
Sent: Friday, April 19, 2013 8:22 AM
To: Muchmore, Dennis (GOV)
Cc: Roberts, John (GOV); Rustem, William (GOV)
Subject: Re: Detroit

Dennis, Bill and John

For what it is worth, I would look at having flint spilt off the water system into some kind of regional authority and separate the finances from the general city if you are going to move forward with kiragani. The city has a propensity to use the water system as a cash cow and it will help them avoid that problem in the future.

Thanks

Eric

Dr. Eric Scorsone
Michigan State University

On Apr 17, 2013, at 5:44 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

> Anytime

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> Sent: Wednesday, April 17, 2013 4:24 PM
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> Subject: Detroit
>
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> 202 Agriculture Hall
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> [redacted]
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> Dr. Eric Scorsone

> Faculty Member and Workgroup Leader
> Department of Agricultural, Food and Resource Economics and MSU
> Extension Michigan State University
> 202 Agriculture Hall
> East Lansing, MI 48824-1039
>
> [redacted]
>

From: Dillon, Andy (Treasury)
Sent: Friday, March 29, 2013 6:45 PM
To: Muchmore, Dennis (GOV)
Cc: Stibitz, Brom (Treasury); Wyant, Dan (DEQ)
Subject: Re: Flint

We grilled them on that quite a bit. There is a maximum guaranteed price on key construction items and the path allegedly presents limited risk- rural, thru areas w no gas or water lines, existing easements etc. I was the skeptic but view of my staff and deq was universal in favor of kwa. I was won over as well. I can't make a legitimate case that financially this is worse for Flint unless today's threat from Shank (DWSD will bill Flint for past capex) is real. We are sorting thru that.

I see lots of political downside as well. Community is invested in this.

Sent from my iPhone

On Mar 29, 2013, at 3:10 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

> How does Kurtz propose to protect them from cost overruns? Did they get a low ball price and how do we keep it from ballooning? Finally, what does that do to the sale value of DWSD?
>
> Sent from my iPhone

From: Stibitz, Brom (Treasury)
Sent: Tuesday, April 09, 2013 9:14 AM
To: Muchmore, Dennis (GOV); Dillon, Andy (Treasury)
Subject: DWSD Letter
Attachments: April 8letter to dwsd.doc

Take a look...

From: Ed Kurtz [mailto:ekurtz@cityofflint.com]
Sent: Tuesday, April 09, 2013 8:20 AM
To: Stibitz, Brom (Treasury)
Subject: Fwd: DWSD

Brom, did you receive the following email yesterday. I would like to contact DWSD, but would like to hear from the Governors office before I do. Ed

---------- Forwarded message ----------
From: **Ed Kurtz** <ekurtz@cityofflint.com>
Date: Mon, Apr 8, 2013 at 10:25 AM
Subject: DWSD
To: Brom Stibitz <StibitzB@michigan.gov>

Brom, attached is a draft of a letter to Sue McCormick that I intend to email to her today, unless you have concerns with the tenor of the letter. We are just kind of tired of reading about "war" and "reckless" and "credible study" and new options in the media. Having said that, we still want to get the best deal for the people of Flint. Also, per our conversations last Friday, what is the status of the decision on our recommendation to go with KWA. Ed

ELECTRONIC LETTER

April 8, 2013

Sue F. McCormick, Director
Detroit Water and Sewerage Department
735 Randolph, Room 506
Detroit MI 48226

Dear Ms. McCormick:

The City of Flint is in receipt of your email of April 8. In it you indicate you would like to meet to discuss DWSD's recent proposals to Flint. The Emergency Manager, the Mayor and the Genesee County Drain Commissioner are not aware of any "recent proposals". We do see mention of other proposals in the media, but we have received nothing new in writing. It is disappointing to the City of Flint that DWSD has chosen to do its negotiation through the media. In particular Flint takes offense to comments such as "effectively launched the greatest water war in Michigan's history", "reckless push" and a continued reference to "a credible state-sponsored study " that we have previously indicated to you that it contained several inaccuracies.

All of this coming from a DWSD consultant that just a little over two years ago indicated that "DWSD is the poster child for Detroit corruption". Short of the DWSD issuing a public apology for the those comments and a public acknowledgment that there are legitimate concerns with the Tucker Young report, the City of Flint would find it difficult to negotiate in good faith with DWSD.

Further, it is the City's belief that you made your best offer to us in December of last year. However, having said that, if you comply with the above conditions, the City of Flint would be willing to review any new options that would be in the best interest of our citizens. Any offer must be in writing, complete in detail, including projected costs over the life of the contract, and provided prior to any meeting. Any offer must also be endorsed by the office of the Detroit Emergency Manager.

Finally, time is of the essence. Please email any of the proposals you referenced in your email to me today.

Sincerely,

Edward Kurtz
Emergency Manager

From: Buhs, Caleb (GOV)
Sent: Thursday, April 11, 2013 7:13 AM
To: Silfven, Ken (GOV); Weiss, Kurt (GOV); Holyfield, Jeff (GOV); Wurfel, Sara (GOV); Muchmore, Dennis (GOV)
Subject: Flint Water Distribution Comm Plan
Attachments: Flint Water Distribution Comm Plan.docx

Attached is the comm plan for the announcement of the Treasurer's determination on the Flint water plan today. Terry will be handling at Treasury, contacting media and fielding follow-up questions. Given that this was the Treasurer's determination to make, we will send all inquiries to Terry. If we receive any questions specific to the Governor I will handle in the afternoon when I get back from Grand Rapids.

Caleb

Flint Water Distribution Comm Plan and Talking Points

4/11/13

Flint Emergency Manager Ed Kurtz submitted a resolution to Treasurer Dillon on Friday, March 29th, seeking approval for Flint to join the Karegnondi Water Authority (KWA) to secure potable water for the City of Flint. The move to join KWA would remove Flint as a customer of Detroit Water and Sewer Department (DWSD). Treasurer Dillon was required to approve the resolution by EM Ed Kurtz per PA 436, because it was an expenditure over $50,000

Communication Plan

Thursday, April 11, 2013

- **9:00 a.m.** Send official notification of approval to EM Ed Kurtz (Brom Stibitz/Amy Hichez)
- **10:00 a.m.** Call Flint Mayor and Council President (Andy Dillon)
- **10:30 a.m.** Call DWSD to notify of decision (Andy Dillon/Brom Stibitz)
- **10:30 a.m.** Contact Flint media (Terry Stanton/Caleb Buhs)
    - Ron Fonger, MLive; WNEM; WJRT; WEYI

Topline Messages

- This is a decision made by the City of Flint and is a local decision that affects their local water supply.
- After thorough review and analysis, Treasurer Dillon approved the resolution for Flint to join the KWA.
- Flint Emergency Manager Ed Kurtz has worked closely the city's elected officials throughout the decision-making process and all agree that this is best for the citizens and businesses in Flint.
- This is a good example of an EM and city officials collaborating to determine the best course of action for the city's future.
- The Departments of Treasury and Environmental Quality have approved the financial and environmental soundness of KWA's plan.
- Flint accounts for only 2% of DWSD's capacity.
- With continued efficiency improvements and ongoing administrative restructuring, DWSD will be suited to handle the loss of customers.

Background

- This move will allow Flint to control future water rates for Flint residents.
- This will save Flint at least $100 million over the next 25 years, and possibly as much as $300 million.

DRAFT

- Genesee County planned to build pipeline whether Flint was part of the project or not. The removal of the county from DWSD accounts for 4% of their capacity.
- Collaboration between the City of Flint and Genesee County could signify the start of a better relationship and could lead to future collaborative endeavors.

DRAFT

From: Buhs, Caleb (GOV)
Sent: Thursday, April 11, 2013 9:19 AM
To: Silfven, Ken (GOV); Weiss, Kurt (GOV); Holyfield, Jeff (GOV); Wurfel, Sara (GOV); Muchmore, Dennis (GOV)
Subject: Re: Flint Water Distribution Comm Plan

FYI, I was told this was on hold until final sign-off is received. I will keep everyone updated as I hear more.

On Apr 11, 2013, at 7:13 AM, "Buhs, Caleb (GOV)" <BuhsC2@michigan.gov> wrote:

> Attached is the comm plan for the announcement of the Treasurer's determination on the Flint water plan today. Terry will be handling at Treasury, contacting media and fielding follow-up questions. Given that this was the Treasurer's determination to make, we will send all inquiries to Terry. If we receive any questions specific to the Governor I will handle in the afternoon when I get back from Grand Rapids.
>
> Caleb
>
> <Flint Water Distribution Comm Plan.docx>

From: Dillon, Andy (Treasury)
Sent: Monday, April 15, 2013 11:11 AM
To: Stibitz, Brom (Treasury); Headen, Frederick (Treasury); Saxton, Thomas (Treasury)
Cc: Muchmore, Dennis (GOV); Roberts, John (GOV)
Subject: Fwd: Flint/KWA

I don't know who Fred the Engineer is.

I spoke to Brooks Patterson Sat night. He won't get in middle of this despite Det News story.

I think we need to understand if the legacy liability issue raised twice now presents a real risk to Flint. Also, Fred were you able to sort thru rate issue we discussed?

Thanks.

Andy

Sent from my iPhone

Begin forwarded message:

> **From:** fredtheengineer <[redacted]>
> **Date:** April 15, 2013, 10:46:35 AM EDT
> **To:** "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>
> **Subject: Flint/KWA**
>
> Dear Mr. Dillon:
> The report produced, at your direction, by TYJT, indicated the most economical option for Flint water is to maintain a contract with DWSD. The KWA option will cost more money. Since some of the funds for the KWA solution will come from State grants and State Revolving Fund loans, that solution will cost me more money in the form of taxes. The best solution from the economic and engineering perspective is DWSD. A purely political decision that ignores economics is not in the public interest.
> Sincerely,
>
> Fred W. Barnes, PE
>
> Sent from my iPhone

From: Headen, Frederick (Treasury)
Sent: Monday, April 15, 2013 1:51 PM
To: Dillon, Andy (Treasury); Stibitz, Brom (Treasury); Saxton, Thomas (Treasury)
Cc: Muchmore, Dennis (GOV); Roberts, John (GOV)
Subject: RE: Flint/KWA

I have a few details to pin down; will need another few hours.

From: Dillon, Andy (Treasury)
Sent: Monday, April 15, 2013 11:11 AM
To: Stibitz, Brom (Treasury); Headen, Frederick (Treasury); Saxton, Thomas (Treasury)
Cc: Muchmore, Dennis (GOV); Roberts, John (GOV)
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> Fred W. Barnes, PE
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> Sent from my iPhone

From: Dillon, Andy (Treasury)
Sent: Tuesday, April 16, 2013 5:12 PM
To: Wyant, Dan (DEQ)
Cc: Stibitz, Brom (Treasury); Saxton, Thomas (Treasury); Muchmore, Dennis (GOV); Roberts, John (GOV)
Subject: Re: KWA and City of Flint

Follow Up Flag: Follow up
Flag Status: Flagged

Thanks Dan.

Sent from my iPad

On Apr 16, 2013, at 4:17 PM, "Wyant, Dan (DEQ)" <WyantD@michigan.gov> wrote:

> Andy,
>
> I have checked with multiple staff from both the Drinking Water Program and the Water Resource Division today. Their comments to me today are the same as before. KWA saves money if they separate.
>
> Dan Wyant, Director
> Department of Environmental Quality
> 517-373-7917
>
> **From:** Creal, William (DEQ)
> **Sent:** Tuesday, April 16, 2013 1:27 PM
> **To:** Wyant, Dan (DEQ); Sygo, Jim (DEQ)
> **Cc:** Verona, Laura (DEQ); Shekter Smith, Liane (DEQ)
> **Subject:** Fwd: KWA and City of Flint
>
> Here are Wrd comments.
>
> Begin forwarded message:
>
> > **From:** "Verona, Laura (DEQ)" <VERONAL@michigan.gov>
> > **Date:** April 16, 2013, 12:00:29 PM EDT
> > **To:** "Creal, William (DEQ)" <CREALW@michigan.gov>
> > **Cc:** "Alexander, Christine (DEQ)" <ALEXANDERC2@michigan.gov>, "Smith, Laura (DEQ)" <SMITHL16@michigan.gov>
> > **Subject: RE: KWA and City of Flint**
> >
> > Hi Bill,
> >
> > From a capacity standpoint, supplying KWA is completely feasible under either proposal with no adverse impact to the rest of the DWSD supply network. The proposal

lists KWAs contracted max day demand at 40.6 mgd, the design and rated capacity of the Lake Huron Plant is 400 mgd. The DWSD service area average and max day are about 650 and 950 mgd; the other four water plants combined have a rated capacity of over 1100 mgd.

I don't know the details of the cost analysis other than what has been reported by DWSD. It is my understanding that over the 30 year pay back period that full service water provided from DWSD would be more a lot more expensive than what KWA has projected if they separate. Several intermediate proposals of varying cost estimates have been presented without success. KWA was issued a permit last fall for constructing an intake (independent of DWSDs) and I think the plan is to start construction as early as this fall. Then a treatment plant would be constructed to treat the water. Flint has a water plant that draws raw water from the Flint River, but the plan would be to purchase raw water from the KWA intake and treat at their plant, using the River as a backup source. KWA has estimated a project cost of $274 million, DWSD estimated the project cost at $375 million; but I don't know exactly what the scope of work was for those estimates so I'm not sure that it's an apples to apples comparison.

Overall, besides the know impacts to DWSD for loss of revenue and increased cost to the rest of the system users to cover fixed cost, debt, etc., there could be other systems revisiting their proposals to separate. Grosse Ile and a few surrounding communities had looked into forming a water authority and building a plant to serve them; Grosse Pointe Park had submitted incomplete plans a few years back to build their own microfiltration plant. At one point, Grosse Pointe Shores was considering a study to see if they could re-work the Grosse Pointe Farms network to purchase water from them rather than DWSD through GP Woods.

Let me know if you want to discuss this further.

thanks,
Laura

From: Creal, William (DEQ)
Sent: Tuesday, April 16, 2013 8:02 AM
To: Verona, Laura (DEQ)
Cc: Alexander, Christine (DEQ); Smith, Laura (DEQ)
Subject: FW: KWA and City of Flint
Importance: High

Laura, please take a look at this and let me know if you have any comments. Need quickly. This appears to be mainly a drinking water issue right now. Thanks.

From: Wyant, Dan (DEQ)
Sent: Tuesday, April 16, 2013 6:51 AM
To: Sygo, Jim (DEQ); Creal, William (DEQ); Shekter Smith, Liane (DEQ)
Cc: Anderson, Madhu (DEQ)
Subject: FW: KWA and City of Flint

Bill and Liane,

Can you have your staff's take a quick look at this and let me know today if they think this changes their thoughts and comments to me last week.

Dan Wyant, Director

From: Dillon, Andy (Treasury)
Sent: Monday, April 15, 2013 7:55 PM
To: Wyant, Dan (DEQ); Dennis Muchmore; Roberts, John (GOV)
Cc: Stibitz, Brom (Treasury); Saxton, Thomas (Treasury)
Subject: Fwd: KWA and City of Flint

FYI

Dan, any thoughts re the attached?

We gave dwsd until today to put best offer on table. Flint is to get back to us tmrw. I want to make sure their expected rejection is made in good faith.

Sent from my iPad

Begin forwarded message

> **From:** "Debra Ragland" <dragland@dwsd.org>
> **To:** "ekurtz@cityofflint.com" <ekurtz@cityofflint.com>
> **Cc:** "jwright@co.genesee.mi.us" <jwright@co.genesee.mi.us>, "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>, "James Fausone" <fausone@dwsd.org>, "orrk@detroitmi.gov" <orrk@detroitmi.gov>, "Sue McCormick" <mccormick@dwsd.org>
> **Subject: KWA and City of Flint**
>
> Please see attached on behalf of Sue F. McCormick.
>
> Faxed copy forwarded to Mayor Dayne Walling and Jeff Wright.

From: Dillon, Andy (Treasury)
Sent: Tuesday, April 16, 2013 7:04 PM
To: Muchmore, Dennis (GOV)
Cc: Stibitz, Brom (Treasury); Headen, Frederick (Treasury); Saxton, Thomas (Treasury); Roberts, John (GOV)
Subject: Re: Flint/KWA

No legacy liability to Flint. DEQ remains firm that kwa best for Flint, lower cost. I think Kurtz held press conference today (4:30 pm) affirming decision. According to Kurtz, he got last offer from Flint Journal. Seems dwsd just wanted to negotiate in the paper. Unless I hear from you, we intend to let decision stand.

Sent from my iPad

On Apr 16, 2013, at 6:12 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

> I thought we had settled all these questions. If so, we need to answer his email with an explanation.
>
> ---
>
> **From:** Dillon, Andy (Treasury)
> **Sent:** Monday, April 15, 2013 11:11 AM
> **To:** Stibitz, Brom (Treasury); Headen, Frederick (Treasury); Saxton, Thomas (Treasury)
> **Cc:** Muchmore, Dennis (GOV); Roberts, John (GOV)
> **Subject:** Fwd: Flint/KWA
>
> I don't know who Fred the Engineer is.
>
> I spoke to Brooks Patterson Sat night. He won't get in middle of this despite Det News story.
>
> I think we need to understand if the legacy liability issue raised twice now presents a real risk to Flint. Also, Fred were you able to sort thru rate issue we discussed?
>
> Thanks.
>
> Andy
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** fredtheengineer <[redacted]>
> > **Date:** April 15, 2013, 10:46:35 AM EDT
> > **To:** "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>
> > **Subject: Flint/KWA**
> >
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from State grants and State Revolving Fund loans, that solution will cost me more money in the form of taxes. The best solution from the economic and engineering perspective is DWSD. A purely political decision that ignores economics is not in the public interest.
Sincerely,

Fred W. Barnes, PE

Sent from my iPhone

From: Dillon, Andy (Treasury)
Sent: Wednesday, April 17, 2013 10:48 AM
To: Wyant, Dan (DEQ)
Cc: Muchmore, Dennis (GOV); Stibitz, Brom (Treasury); Roberts, John (GOV)
Subject: Re: KWA and City of Flint

Thanks Dan.

Sent from my iPad

On Apr 17, 2013, at 10:45 AM, "Wyant, Dan (DEQ)" <WyantD@michigan.gov> wrote:

> Andy,
>
> More DEQ staff comments attached from this morning. Our analysis has not changed.
>
> Dan Wyant, Director
> Department of Environmental Quality
> 517-373-7917
>
> **From:** Thelen, Mary Beth (DEQ)
> **Sent:** Wednesday, April 17, 2013 10:43 AM
> **To:** Wyant, Dan (DEQ)
> **Subject:** FW: KWA and City of Flint
>
> **From:** Busch, Stephen (DEQ)
> **Sent:** Wednesday, April 17, 2013 9:51 AM
> **To:** Sygo, Jim (DEQ); Shekter Smith, Liane (DEQ); Thelen, Mary Beth (DEQ)
> **Cc:** Shaler, Karen (DEQ); Benzie, Richard (DEQ); Prysby, Mike (DEQ)
> **Subject:** RE: KWA and City of Flint
>
> Director Wyant, Deputy Director Sygo, and Liane,
>
> A response at this point may be moot as Flint and Genesee Co. already held a press conference yesterday rejecting the DWSD offer.
>
> It is also unclear whether DWSD provided its offer directly to Flint and Genesee Co. by the deadline in Treasurer Dillon's letter. However, Flint and Genesee Co. still took the offer under consideration.
>
> Our office concurs with both Flint and Genesee Co. that the offers provided by DWSD were incomplete.
>
> Of the two scenarios provided by DWSD it appeared that only Scenario 2 was listed as potentially being more cost effective. However, this scenario did not address the following:
>
> 1. The DWSD scenarios are based on 40 MGD of service capacity. However, the KWA project is providing 60 MGD of initial capacity with potential expansion to 75 MGD in the future. Therefore, in order for a more direct comparison the DWSD scenario would need to increase capacity to 60 MGD, which would increase fixed rate commodity costs as well as the

capital costs for the Huron Plant that DWSD was planning to allocate to Flint and Genesee Co., presumably by as much as 50%.

2. DWSD proposals cover a 30 year period to 2042, but fail to recognize that after this period bond payments for the KWA project will be complete and result in a significant reduction in costs for the KWA option.

3. While DWSD indicates that Flint and Genesee Co. would be given "broadened representation", it remains unclear exactly what this means in terms of actual control in the decision making process.

4. This scenario continues to rely on a single transmission system and would require the City of Flint to maintain its WTP for emergency purposes and these costs do not appear to be included. In addition, use of the Flint WTP as an emergency backup would leave Genesee Co. without an adequate backup supply to meet their 30 year needs.

Again, without DWSD providing the specific details of these proposals, it is difficult to provide a true comparative analysis, and as such Flint and Genesee Co. appear to be justified in their rejection of these proposals.

Please let me know if you require any further response.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Sygo, Jim (DEQ)
Sent: Tuesday, April 16, 2013 9:59 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Shekter Smith, Liane (DEQ); Shaler, Karen (DEQ); Thelen, Mary Beth (DEQ)
Subject: FW: KWA and City of Flint

Steve, Mike and Richard,

Please take a look at DWSD's last best offer to the City of Flint and provide your collective perspective to the Director through Liane by the end of the week. Copy me in as well. I'll be out of the office but would like to know if you think this is worth considering.

Thank you for your expedited review.

From: Wyant, Dan (DEQ)
Sent: Tuesday, April 16, 2013 6:52 AM
To: Sygo, Jim (DEQ)
Subject: FW: KWA and City of Flint

Jim,

Liane is out of the office today, Can you forward this directly to her staff that worked on this with us.

Dan Wyant, Director
Department of Environmental Quality
517-373-7917

From: Wyant, Dan (DEQ)
Sent: Tuesday, April 16, 2013 6:51 AM
To: Sygo, Jim (DEQ); Creal, William (DEQ); Shekter Smith, Liane (DEQ)
Cc: Anderson, Madhu (DEQ)
Subject: FW: KWA and City of Flint

Bill and Liane,

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Department of Environmental Quality
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From: Dillon, Andy (Treasury)
Sent: Monday, April 15, 2013 7:55 PM
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Cc: Stibitz, Brom (Treasury); Saxton, Thomas (Treasury)
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> **Cc:** "jwright@co.genesee.mi.us" <jwright@co.genesee.mi.us>, "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>, "James Fausone" <fausone@dwsd.org>, "orrk@detroitmi.gov" <orrk@detroitmi.gov>, "Sue McCormick" <mccormick@dwsd.org>
> **Subject: KWA and City of Flint**
>
> Please see attached on behalf of Sue F. McCormick.
>
> Faxed copy forwarded to Mayor Dayne Walling and Jeff Wright.

From: Dillon, Andy (Treasury)
Sent: Wednesday, April 17, 2013 10:50 AM
To: Saxton, Thomas (Treasury); Stanton, Terry A. (Treasury); Stibitz, Brom (Treasury)
Cc: Muchmore, Dennis (GOV); Roberts, John (GOV); Wyant, Dan (DEQ)
Subject: Fwd: KWA and City of Flint

May not be a bad idea to have this available for public consumption seeing as the two sides like to negotiate in the media.

Sent from my iPad

Begin forwarded message:

> **From:** "Wyant, Dan (DEQ)" <WyantD@michigan.gov>
> **Date:** April 17, 2013, 10:45:45 AM EDT
> **To:** "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>
> **Subject: FW: KWA and City of Flint**
>
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> **Cc:** "jwright@co.genesee.mi.us" <jwright@co.genesee.mi.us>, "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>, "James Fausone" <fausone@dwsd.org>, "orrk@detroitmi.gov" <orrk@detroitmi.gov>, "Sue McCormick" <mccormick@dwsd.org>
> **Subject: KWA and City of Flint**
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> Faxed copy forwarded to Mayor Dayne Walling and Jeff Wright.

From: Dillon, Andy (Treasury)
Sent: Wednesday, April 17, 2013 4:12 PM
To: Hichez, Amy (Treasury)
Cc: Stibitz, Brom (Treasury); Muchmore, Dennis (GOV); Roberts, John (GOV); Scott, Allison (GOV)
Subject: Re: Water meeting with Gov, Orr plus others

Ok to book during that window. Can it be in Detroit? This delay likely means Flint will be pregnant w KWA by then.

We let Kurtz come w he and two or three and DWSD Fausone w same # as Flint.

Also, invite Wyant and Key engineer. One from Tucker Young.

Dennis, I didn't send Governor report from DEQ (email I sent you) but will now. Is there a max # of people for this?

Sent from my iPad

On Apr 17, 2013, at 4:04 PM, "Hichez, Amy (Treasury)" <HichezA@michigan.gov> wrote:

> The Governor would like to do this meeting next week. The Governor as well as Mr. Orr are available on Wed April 24th from 1-4pm. Andy, you requested a hold from 12-5 for a meeting with Mr. Buckfire on this day. Please clarify what you would like to do and WHO are the attendees/contacts for DWSD and KWA?
>
> -----Original Message-----
> From: Dillon, Andy (Treasury)
> Sent: Wednesday, April 17, 2013 2:19 PM
> To: Muchmore, Dennis (GOV)
> Cc: Stibitz, Brom (Treasury); Scott, Allison (GOV); Roberts, John (GOV); Hichez, Amy (Treasury)
> Subject: Re: KWA & DWSD
>
> Ok. Amy, please get available times and dates from Governor. We should ask Wyant and one of his engineers.
>
> Isn't Gov in Flint Friday? Maybe we could do it then in Flint if his schedule permits.
>
> Sent from my iPad
>
> On Apr 17, 2013, at 1:44 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:
>
> > The Gov would like you to call together Orr, Kurtz, DWSD, KWA and talk the situation through. He will participate. If something is resolved it will be good, if not, so be it.
>
> Amy Hichez
> Executive Administrator to State Treasurer Andy Dillon
> Richard H. Austin Building

430 West Allegan Street
Lansing, MI 48922
Office: 517-241-2624
[redacted]
Fax: 517-335-1785

From: Dillon, Andy (Treasury)
Sent: Thursday, April 25, 2013 1:08 PM
To: Stibitz, Brom (Treasury); Saxton, Thomas (Treasury); Muchmore, Dennis (GOV); Roberts, John (GOV); Wyant, Dan (DEQ); George Karmo; David Guastella
Subject: Fwd: Responses to Questions from Flint received last evening
Attachments: DOC042513.pdf; ATT00001.htm

Sent from my iPad

Begin forwarded message:

> **From:** Matthew Schenk <schenk@dwsd.org>
> **Date:** April 25, 2013, 11:27:13 AM CDT
> **To:** "ekurtz@cityofflint.com" <ekurtz@cityofflint.com>, "Dillon, Andy (Treasury)" <DillonA2@michigan.gov>, "Scott, Allison (GOV)" <scotta12@michigan.gov>, "orrk@detroitmi.gov" <orrk@detroitmi.gov>
> **Cc:** jfausone <[redacted]>, Sue McCormick <mccormic@dwsd.org>, Nicolette Bateson <bateson@dwsd.org>, William Wolfson <wolfson@dwsd.org>
> **Subject: Responses to Questions from Flint received last evening**
>
> Mr. Kurtz,
>
> Please find attached responses to the 11 questions sent by Flint last evening to DWSD. Also, attached are revised exhibits to reflect the proposed change to reserve 60MGD of capacity beginning in year 1 of the prposed contract.
>
> Please advise if you have any additional questions. We look forward to continue working with Flint on this important issue.
>
> --
> Matthew Schenk
> Chief Operating Officer/
> Chief Compliance Officer
> DWSD
> City of Detroit
> Dave Bing, Mayor
> [redacted]

DWSD's responses to Flint's Questions

April 25, 2013

Question 1: How does this proposal conflict with Article 14 ("Ensuring Equality of Contract Terms") of the existing contracts, which will result in a re-shuffling of cost and bring Flint/GCDC back to its original costs?

Response: This proposal is fully consistent with Article 14 of the Model Water Contract. Specifically, Article 14 provides that any existing customer can receive the benefit of a future contract provided to a different customer *provided that the existing customer assumes all of the new contract terms*. In other words, an existing customer cannot select one or two more preferable provisions without accepting the remaining terms that could be viewed as less preferable.

DWSD's proposal to Flint/KWA is unique in several aspects that would likely not be attractive to other existing customers of the system. Most notably, DWSD's proposal to Flint/KWA not only relieves DWSD of any financial obligation to provide redundancy for water service, but it also requires the customer to maintain its own treatment plant for redundancy. Additionally, the Flint/KWA proposal develops a fixed cost for the customer to guarantee a minimum capacity over the life of the contract. DWSD's other contracts allow for adjustments both up and down based upon changes in demand.

Question 2a: To compare apples to apples, KWA provides 60 mgd capacity. DWSD only provides 40 mgd. Will DWSD require purchase of 60 mgd capacity today or can we purchase 40 mgd today and reserve 20 mgd for later? Is there a premium penalty or no additional cost?

Response: The DWSD Proposal provides 60 MGD capacity in a stepped fashion consistent with the specification, providing Flint/GC the ability to adjust for actual growth rather than incur a larger initial obligation. Given the excess capacity in the system, there is little likelihood that capacity would not be available if and when it is needed by Flint/GC. However, Flint/GC may reserve 60 MGD capacity throughout the contract term. The new exhibits attached and dated 4/25/13 have been revised to reflect a contract reservation of 60 MGD throughout the term of the contract and would replace Exhibit 1 and Exhibit 3 previously provided.

Even with the reservation of this additional capacity, the total Water Utility Costs through 2042 are only $3,215.04 million, or $908.85 million less than the KWA scenario. This would result in a 37% decrease in rates for Flint in year one from current rates. This relative decrease would grow over the life of the contract.

Question 2b: Will DWSD stipulate that our cost cannot be increased due to regionalization?

Response: This broad question covers a number of topics. First, DWSD has proposed a contract cost structure that includes fixed charges to the greatest extent possible consistent with State Law. This structure provides significant protection from future rate increases. As was indicated by Mr. Kevyn Orr during our meeting on Friday, April 19, 2013, it is the view of DWSD and the City of Detroit that there will be a strong business case to justify suburban wholesale customers participating in any payment stream to the City of Detroit based on finance cost improvements associated with DWSD becoming a regional authority. Additionally, if Flint participates in the governance structure of the new Authority, it will be part of the deliberative process to agree upon the payment stream.

Question 3: DWSD indicated that the current capital improvement plan only includes replacement of one low lift pump. It has also come to our attention that the DWSD is contracting for a new capital improvement plan as of April 24, 2013.

Response: DWSD's CIP is updated annually. On April 24, 2013 the Board of Water Commissioner's (BOWC) approved a contract for an update to the Water Master Plan. The Water Master Plan is anticipated to provide insight relevant to future CIP's including asset management strategies that would extend the life of existing assets for the lowest NPV, however, the CIP is a separate and distinct effort.

Question 4: How old is the current CIP? Will Flint have input on the CIP? Please provide a better definition of "level of control" as used in your letter.

Response: The CIP is updated annually and on a schedule that is timed to run concurrent with development of the Annual Budget. The current CIP was adopted by the BOWC on January 23, 2013.

Question 5: What happens if substantial changes occur to the Port Huron Plant/Pipeline for the benefit of other customers?

Response: DWSD acknowledges that it is possible that there are investments in the Lake Huron system that might be made solely for the benefit of other customers of the DWSD system. Should investments of this nature be made, their cost would be excluded from the calculation of Flint's obligations. It is also possible that investments in the Lake Huron system might only benefit the Flint/GC Back up supply. Should this occur, any such adjustment would affect a minor component of the overall costs to Flint.

Question 6: Please explain why we are 20% of "other" (meters, outreach etc. – 7.5, 125, 25, 20%, 1.5).

Response: The 20% allocation of cost is a flow proportional allocation.

Question 7: If Lapeer is not part of the system, are we 100% of pipeline?

Response: Yes, if the GLCUA flow is removed from the line, Flint's flow requirement is 100% of the flow on the section of transmission main west of Imlay City.

Question 8: If we are responsible for 100% of the capital of the pipeline and 100% of the operations of the pipeline, why not turn it over to Flint? What would be the sale price?

Response: While it is not totally clear to DWSD what the question envisions in terms of the definition of the "pipeline" proposed to be sold to Flint, DWSD has in prior proposals and continues today to be open to discussing the opportunities to sell infrastructure to Flint/KWA as part of a long-term public/public partnership contractual arrangement. In prior proposals, offers specific to the 72 inch transmission main envisioned such a potential sale subject to more specific negotiations which might include reservation of wheeling rights to DWSD to service additional customers, address issues of competition associated with the use of the asset, etc.

While DWSD remains open to discussion, given the nature of the transaction, it is not possible to specify a purchase price or other terms at this time.

Question 9: When would this rate become effective, July 1, 2013 or July 1, 2014?

Response: The proposal indicates that these rates and charges are available as early as July 1, 2014. Rates and Charges for the FY beginning July 1, 2013 have already been adopted by the Board of Water Commissioners as necessary to meet the system's overall revenue requirements.

Question 10: As part of the discussions on Friday, April 19, 2013, should Flint/GCDC separate from Detroit, would DWSD be willing to enter into a contract extension for water supply during the construction period (3 years)? At what cost or premium would DWSD charge? And what is the basis for that charge?

Response: Again, this is a rather difficult question to answer with any specificity. As you may be aware, pursuant to Judge Sean F. Cox's order of November 4, 2011, the Board of Water Commissioners has full and final authority to approve rates for all suburban customers of DWSD. DWSD would certainly be willing to provide interim service to Flint during the construction phase of KWA on terms and rates as established by the Board of Water Commissioners. To the extent that your question is seeking clarification on the portion of charges that would be attributable to "stranded costs," I would refer you back to the letter dated April 24, 2013 that I sent to State Treasurer Dillon, with a copy to Ed Kurtz. Please keep in mind that the rates charged during the interim period would be consistent with state law requirements that would prohibit DWSD from charging rates that would generate a "profit" for DWSD.

Question 11: Would DWSD be willing to sell the section of pipeline from Imlay to Baxter and Potter if Lapeer also joins KWA? What would the cost be? If DWSD is willing to sell the pipeline, would they be willing to sell water to KWA on a standby basis? If so, what would be the cost?

Response: As stated previously, DWSD would be willing to look at opportunities to sell certain sections of pipeline to Flint as part of a public/public partnership arrangement.

Should Flint opt to join KWA and no longer be a customer of DWSD, DWSD would still be willing to look at opportunities to sell existing pipeline to Flint, with appropriate reservations of wheeling rights and non-compete clause language.

With regards to DWSD's interest in entering negotiation for potential standby service to KWA, should Flint leave the DWSD system, DWSD has previously indicated that we are open to discussion. Pricing of standby service in this proposal for a public/public partnership is on a significantly discounted basis as reflected in the attached Exhibit 1, page 2. DWSD has not calculated what a standby charge might be as related to the unspecified requirements to another utility.

Attachments

EXHIBIT 1
Calculation of DWSD Water Rate to KWA
Hypothetical FY 2013-14 Rate Structure

			Annual Rev Req't *(millions)*	Unit Basis	Units		Avg Unit Cost		Rate Structure	
1	Capital Revenue Requirements	$	7.98	months	12			$	665,100	per month
2	Operating Revenue Requirements	$	4.40	Mcf	1.220			$	3.61	per Mcf
3	Subtotals / Avg Unit Cost	$	12.38		*1.220*	*$*	*10.15*			per Mcf
4	Standby Charge	$	3.32		12			$	276,900	per month
5	Totals / Avg Unit Cost	$	15.70		*1.220*	*$*	*12.87*			per Mcf
6	Total Monthly Charge							**$**	**942,000**	**per month**
7	Total Commodity Rate							**$**	**3.61**	**per Mcf**
8	*plus: Redundancy Solution (a)*	*$*	*8.59*		*Not a DWSD Cost*					
	(a) Redundancy Solution Calculations									
9	*Cost of Redundant Line*	*$*	*94.68*							
10	*Issuance Expenes, etc.*	*$*	*2.18*							
11	*Required Financing*	*$*	*96.86*							
12	*Finance Rate*		*5%*							
13	*Finance Term*		*25*							
14	*Annual Payment*	*$*	*6.87*							
15	*Debt Svc Coverage*		*125%*							
16	*Annual Revenue Requirement*	*$*	*8.59*							

EXHIBIT 1

Allocation of FY 2013-14 Revenue Requirements

		"LH System"		KWA Communities		
		Revenue Req't *$ millions*	Capacity / Usage *mgd*	Capacity / Usage *mgd*	Relative Share *%*	Revenue Req't *$ millions*
	Capital Cost Recovery					
1	Treatment - LH WTP	30.35	400	60	15.0%	4.55
2	Pipeline - LH to Imlay	1.35	440	64	14.5%	0.20
3	Imlay Station	6.85	440	64	14.5%	1.00
4	Pipeline - Imlay to Baxter/Potter	0.74	64	64	100.0%	0.74
5	Other (Meters, Outreach, etc.)	7.50	125	25	20.0%	1.50
6	Total Capital Cost Recovery	46.79			*17.1%*	7.98
	Operating Costs					
7	Treatment - LH WTP	15.02	125	25	20.0%	3.00
8	Pipeline - LH to Imlay	0.29	125	25	20.0%	0.06
9	Imlay Station	4.51	125	25	20.0%	0.90
10	Pipeline - Imlay to Baxter/Potter	0.23	25	25	100.0%	0.23
11	Other (Meters, Outreach, etc.)	1.02	125	25	20.0%	0.20
12	Total Operation and Maintenance	21.07			*20.9%*	4.40
	Annual Revenue Req't					
13	Treatment - LH WTP	45.37				7.56
14	Pipeline - LH to Imlay	1.64				0.25
15	Imlay Station	11.36				1.90
16	Pipeline - Imlay to Baxter/Potter	0.96				0.96
17	Other (Meters, Outreach, etc.)	8.52				1.70
18	Subtotal DWSD Revenue Req't	67.87				12.38

Calculation of Standby Charge

		Total	LH System	Other
19	Capacity - mgd	1,760	400	1,360
20	Total "Backbone" Capital Costs - $millions	227.54	46.79	180.75
21	Unit Capital Costs	0.129	0.117	0.133
22	Standby Requirements = Average Day			25
23	Standby Revenue Requirement - $millions			3.32

EXHIBIT 2
DWSD Water Supply Costs Estimates to Flint

Option	**Water Supply** Costs ($) through 2042	Ranking by Cost
DWSD 4/23/2013 Proposal	328,669,100	1
DWSD 8 MGD Max Day @ Imlay	634,795,500	2
*KWA (10/31/12 No Overruns, As Provided) **	649,775,200	3
DWSD 8 MGD Max Day @ Baxter / Potter	672,671,700	4
KWA-1 (10/31/12 No Overruns with Financing Costs)	707,279,700	5
DWSD 12 MGD Max Day @ Imlay	725,576,800	6
DWSD 12 MGD Max Day @ Baxter / Potter	762,110,300	7
KWA-2 (Treasury Estimate)	766,784,300	8
DWSD 12 mgd Twin Line Proposal / No blending	818,092,200	9
DWSD 18 MGD Max Day @ Baxter / Potter	821,226,300	10

Italicized Options as presented in TYJT Report
Only reflects estimated WATER SUPPLY Costs.

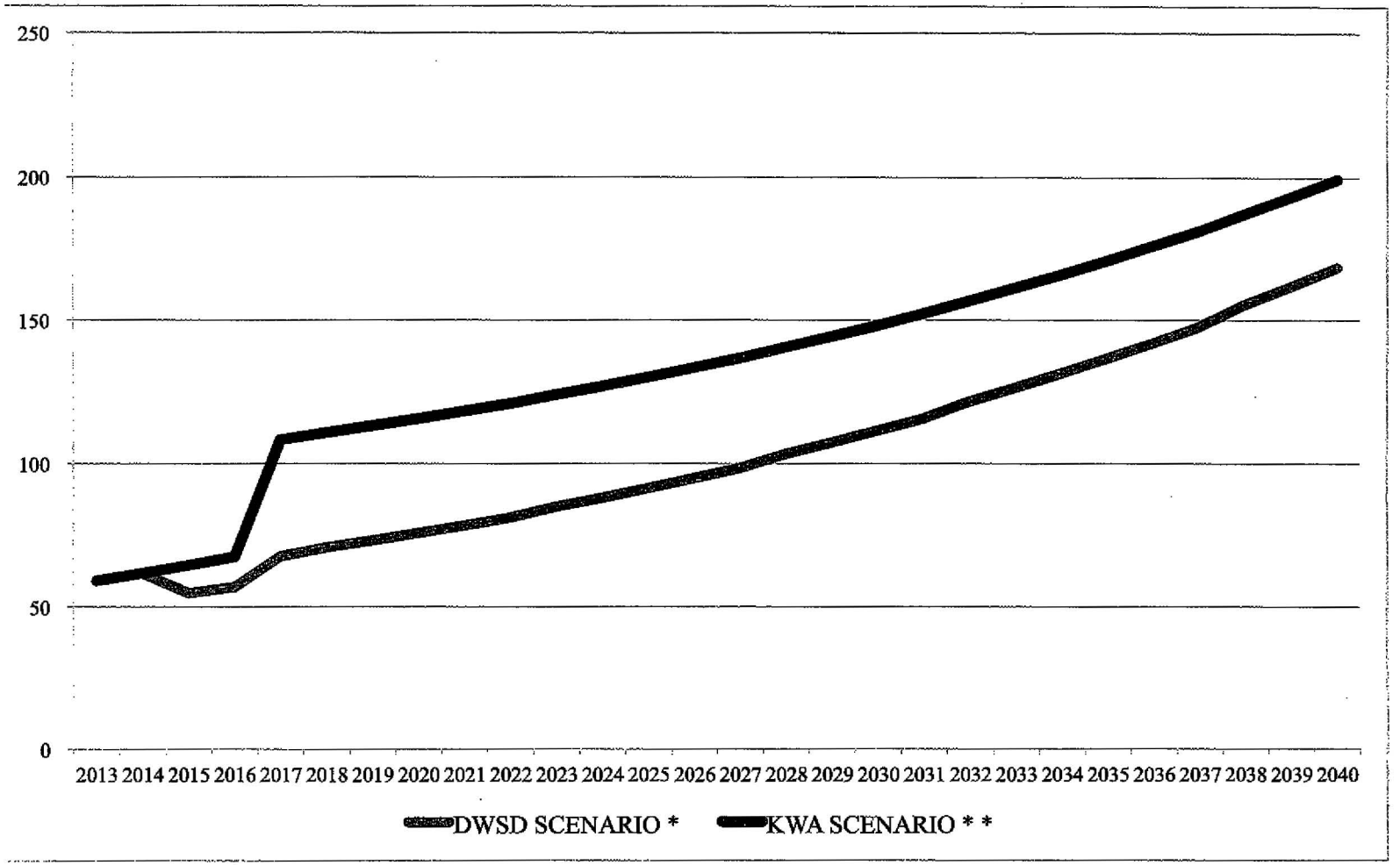
DWSD Water Supply Costs Estimates to Flint / GCDC
$ millions

	Total Water Costs ($) through 2042	
DWSD 4/23/2013 Proposal	3,215.04	1
Estimate of KWA Scenario	4,123.89	2

Reflects ALL WATER UTILTY costs, including local Flint / GCDC requirements.

EXHIBIT 3

SUMMARY OF **TOTAL** PROJECTED WATER COSTS TO FLINT/GCDC - SCENARIO COMPARISON *($ millions)*



NOTE - This chart reflects estimated TOTAL water utility costs for the KWA Service Area, including local requirements of the Flint and GCDC Systems.

* Includes current annual capital costs for purchase of capacity in current LH System, based on escalated capacity from specifications. Does not include any additional future LH System capital costs. Includes LH System operating costs and standby charges for the rest of the System.

** It has come to our attention that the KWA Scenario will require construction of 14 days of raw water storage. Costs associated with such a project have not been published and are not included in this comparison.

From: Hollins, Harvey (GOV)
Sent: Tuesday, December 04, 2012 11:02 AM
To: Roberts, John (GOV)
Cc: Muchmore, Dennis (GOV)
Subject: Re: Highland Park Emergency Decision to Discontinue Operations at Water Treatment Plant

Thanks John, we have been working with Highland Park and Detroit Water for a few months. This is a good move for Highland Park...something I am hoping Hamtramick should consider even though their water situation is good.

The next big issue re Detroit Water might be Flint.

On Dec 4, 2012, at 10:37 AM, "Roberts, John (GOV)" <robertsj9@michigan.gov> wrote:

FYI

John Roberts

Begin forwarded message:

From: "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
Date: December 4, 2012, 8:48:05 AM EST
To: "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>, "Silfven, Ken (GOV)" <silfvenk@michigan.gov>, "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov>
Cc: "Roberts, John (GOV)" <robertsj9@michigan.gov>, "Rustem, William (GOV)" <rustemw@michigan.gov>
Subject: FW: Highland Park Emergency Decision to Discontinue Operations at Water Treatment Plant

Highland Park mayor yesterday announced they expect to be on Detroit's water supply "for some time."
Estimated cost of repairs is likely well in excess of $15 million. Water department already operating in deficit.
Action 7 news story below. Reporter did a good job. Call me with questions.
b

Brad Wurfel

Communications Director

Michigan Department of Environmental Quality

517-241-7395 - office

[redacted]

http://www.wxyz.com/dpp/news/region/wayne_county/Highland-Park-mayor-to-make-announcement-on-closing-of-water-treatment-plant

Subject: Fwd: DM/HH/DM Meeting with Flint Ministers
Location: Romney Bldg -- Governor's Cabinet Room

Start: Wed 2/4/2015 2:00 PM
End: Wed 2/4/2015 3:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Clayton, Stacie (GOV)
Required Attendees: Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Murray, David (GOV); Wisniewski, Wendy (GOV); Wyant, Dan (DEQ) (WyantD@michigan.gov); Saxton, Thomas (Treasury); Thelen, Mary Beth (DEQ); Pleyte, Beth (Treasury)

For this afternoons meeting

Sent from my iPad

Begin forwarded message:

From: "Clayton, Stacie (GOV)" <claytons3@michigan.gov>
To: "Wisniewski, Wendy (GOV)" <wisniewskiw@michigan.gov>
Subject: DM/HH/DM Meeting with Flint Ministers

Purpose
To continue discussion regarding Flint water matters and $2million grants announced at Press Conference on Tuesday (2/3/15)

Attendees
Dennis Muchmore
Harvey Hollins
David Murray
Rep. Sheldon Neely
Pastor David Gailbraith, Michigan Prophetic Voices
Rev. Alfred Harris, President of Concerned Pastors of Flint
Rev. Ira Edwards
Pastor Latrelle Holmes
Pastor Daniel Moore, Shiloh Missionary Baptist Church
Pastor Byron Moore, Vernon Chapel
Superintendent Chris Martin, Cathedral of Faith
Bishop Bernadel Jefferson, Faith Deliverance Center
Pastor Rodney Ellison
Rev. Jay Cummings
Pastor Charles Dantzler
Pastor Monique Turner

Pastor Floyd Fuller
Pastor Gerald Caldwell
Pastor Quentin Marshall
Pastor Patrick McNeil
Pastor Montez Warre
Pastor Mark Jones
Pastor Allen Overton

Pastor Wallace Hill

Subject:	Flint Water Meeting with Pastor Overton & Flint Water Coalition
Location:	Governor's Conference Room
Start:	Tue 8/4/2015 9:30 AM
End:	Tue 8/4/2015 10:30 AM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Clayton, Stacie (GOV)
Required Attendees:	Hollins, Harvey (GOV); Muchmore, Dennis (GOV)
Optional Attendees:	Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Wurfel, Brad (DEQ); Pleyte, Beth (Treasury); Dempkowski, Angela (Treasury)

Flint Attendees

Rev. Alfred Harris
Rev. Wallace Hill
Laura Sullivan
Melissa May
Clara McClinton
LeeAnne Walters
Rev. Allen Overton

Subject: T/C Jeff Wright Genesee County Drain Commission
Location: [redacted]

Start: Wed 9/2/2015 2:00 PM
End: Wed 9/2/2015 2:15 PM

Recurrence: (none)

Organizer: Muchmore, Dennis (GOV)

Re: KWA

Subject: T/C - Muchmore/Wurfel/Pallone re Flint Water
Location: [redacted]#

Start: Fri 9/11/2015 12:30 PM
End: Fri 9/11/2015 1:00 PM

Recurrence: (none)

Meeting Status: Meeting organizer

Organizer: Muchmore, Dennis (GOV)
Required Attendees: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)

[redacted]
[redacted]#
[redacted]– Dennis to host

Subject: Conf Call per Wayne Workman re Flint - NK/WW/TS/DM/JA/HH
Location: [redacted]

Start: Fri 11/20/2015 11:00 AM
End: Fri 11/20/2015 11:30 AM

Recurrence: (none)

Meeting Status: Meeting organizer

Organizer: Muchmore, Dennis (GOV)
Required Attendees: Nick A. Khouri (KhouriN@michigan.gov); Workman, Wayne (TREASURY); Saxton, Thomas (Treasury) (SaxtonT@michigan.gov); Agen, Jarrod (GOV); Harvey Hollins (hollinsh@michigan.gov); Clayton, Stacie (GOV); Dempkowski, Angela (Treasury); Pleyte, Beth (Treasury); Doyle, Maureen (Treasury)

[redacted]
[redacted]#
[redacted]– Dennis to host

From: Hovey, Amy <Amy.Hovey@mail.house.gov>
Sent: Monday, June 01, 2015 2:39 PM
To: Muchmore, Dennis (GOV)
Subject: Flint Water Situation

Good afternoon Dennis –

It was great talking with you at the Michigan Policy Conference last week. I am writing to follow up. I am hoping that we can schedule a meeting with the Michigan Health Endowment Fund to discuss the possibilities of the getting a grant to help with the water situation in Flint. At least some subsidy dollars for the very poor that are paying water bills three times higher than the average citizen in this state. I can make myself available to meet in Lansing.

Thank you for your help with this critical issue. I look forward to hearing from you soon.

Enjoy your day!
Amy

Amy Hovey
District Chief of Staff
Congressman Dan Kildee (MI-05)
801. S Saginaw St.
Flint, MI 48502
[redacted]
www.dankildee.house.gov
www.dankildee.house.gov

http://dankildee.house.gov/newsletter-subscription/

From: Paul Hillegonds <[redacted]>
Sent: Wednesday, June 03, 2015 8:00 AM
To: Muchmore, Dennis (GOV)
Cc: Julie Skubik
Subject: Re: Flint Water Situation

Yes. I'm asking Julie to work with Wendy on setting a meeting time.

Sent from my iPad

On Jun 1, 2015, at 5:29 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

> Can we meet with you to discuss this?
>
> ---
>
> **From:** Hovey, Amy [mailto:Amy.Hovey@mail.house.gov]
> **Sent:** Monday, June 01, 2015 2:39 PM
> **To:** Muchmore, Dennis (GOV)
> **Subject:** Flint Water Situation
>
> Good afternoon Dennis –
>
> It was great talking with you at the Michigan Policy Conference last week. I am writing to follow up. I am hoping that we can schedule a meeting with the Michigan Health Endowment Fund to discuss the possibilities of the getting a grant to help with the water situation in Flint. At least some subsidy dollars for the very poor that are paying water bills three times higher than the average citizen in this state. I can make myself available to meet in Lansing.
>
> Thank you for your help with this critical issue. I look forward to hearing from you soon.
>
> Enjoy your day!
> Amy
>
> **Amy Hovey**
> District Chief of Staff
> Congressman Dan Kildee (MI-05)
> 801. S Saginaw St.
> Flint, MI 48502
> [redacted]
> www.dankildee.house.gov
> www.dankildee.house.gov
> <image001.gif><image002.gif> <image003.jpg> <image004.png>
>
> http://dankildee.house.gov/newsletter-subscription/

From: Paul Hillegonds <[redacted]>
Sent: Thursday, June 25, 2015 1:37 PM
To: Jamie Gaskin
Cc: Dan Kildee; Dayne Walling; Jim Ananich; Sheldon Neeley; Phil Phelps; Amy Hovey
Subject: Re: United Way of Genesee County Proposal

Jamie,

Thank you for sending the proposal from the United Way of Genesee County to the Michigan Health Endowment Fund, requesting a $500,000 grant to assist City of Flint residents with their water bills. Thank you, too, for sharing letters of support from Flint community leaders.

I will be sharing the proposal with the MHEF Grantmaking Committee, which is currently preparing the Fund's 2015 grants program. I anticipate that in late July, we will be announcing a program and accepting applications until mid-September. Grants will be awarded in December and early next year. As we discussed, the Grants Committee is considering inviting community foundations to identify the most pressing health and wellness issues in their regions and submit proposals to the MHEF. If our board supports this approach, the best opportunity to seek a $500,000 grant will be through your local community foundation. After the committee has prepared its program recommendation for approval by the MHEF board, I will be in touch with you about next steps.

Thanks again.

Paul

Sent from my iPad

> On Jun 22, 2015, at 4:05 PM, "Jamie Gaskin" <[redacted]> wrote:
>
> Mr. Hillegonds:
>
> I have attached the proposal from the United Way of Genesee County to the MI Health Endowment Fund. Per our conversation I am also ccing this application to Amy Hovey, District Chief of Staff, Congressman Dan Kildee. Please feel free to contact me with any questions or additional documents that may be needed such as 990's or Audits. Thanks again so much for any advocacy you can provide.
>
> James Gaskin
> CEO
> United Way of Genesee County
>
> From: Jamie-Lee Venable
> Sent: Monday, June 22, 2015 3:53 PM
> To: Jamie Gaskin
> Subject: United Way of Genesee County Proposal
>
>

>
> Jamie-Lee Venable
> Director, Community Impact
> United Way of Genesee County and BEST Project
> 111 E Court St, Suite 3A, Flint MI 48502 Direct Line: [redacted]
>
>
>
> <Attachment A Brochure.pdf>
> <Attachment B Program Budget.xlsx>
> <Attachment C Support Letters.pdf>
> <Attachment D City Ordinance.pdf>
> <Water Proposal.docx>

From: Dayne Walling <dwalling@cityofflint.com>
Sent: Thursday, June 25, 2015 3:01 PM
To: Hollins, Harvey (GOV); Muchmore, Dennis (GOV)
Subject: Fwd: United Way of Genesee County Proposal

Gentlemen, we do desperately need this relief for our water customers. Our plan is to provide assistance to those with a record of payment who need a bridge to a sustainable payment plan. This helps the customers and their families and also keeps another paying customer on our system as we work to stabilize. Please do see what can be done for this to be a direct grant instead of waiting months and months and then restarting at the community foundation level. Anything you can do...please.
Thanks, Dayne

---------- Forwarded message ----------
From: **Flint Mayor** <mayor@cityofflint.com>
Date: Thu, Jun 25, 2015 at 1:37 PM
Subject: Fwd: United Way of Genesee County Proposal
To: Dayne Walling <dwalling@cityofflint.com>

---------- Forwarded message ----------
From: **Paul Hillegonds** <Paul@mhealthfund.com>
Date: Thu, Jun 25, 2015 at 1:37 PM
Subject: Re: United Way of Genesee County Proposal
To: Jamie Gaskin <jgaskin@unitedwaygenesee.org>
Cc: Dan Kildee <dan.kildee@mail.house.gov>, Dayne Walling <mayor@cityofflint.com>, Jim Ananich <senjananich@senate.michigan.gov>, Sheldon Neeley <sheldonneeley@house.mi.gov>, Phil Phelps <repphelps@house.mi.gov>, Amy Hovey <Amy.Hovey@mail.house.gov>

Jamie,

Thank you for sending the proposal from the United Way of Genesee County to the Michigan Health Endowment Fund, requesting a $500,000 grant to assist City of Flint residents with their water bills. Thank you, too, for sharing letters of support from Flint community leaders.

I will be sharing the proposal with the MHEF Grantmaking Committee, which is currently preparing the Fund's 2015 grants program. I anticipate that in late July, we will be announcing a program and accepting applications until mid-September. Grants will be awarded in December and early next year. As we discussed, the Grants Committee is considering inviting community foundations to identify the most pressing health and wellness issues in their regions and submit proposals to the MHEF. If our board supports this approach, the best opportunity to seek a $500,000 grant will be through your local community foundation. After the committee has prepared its program recommendation for approval by the MHEF board, I will be in touch with you about next steps.

Thanks again.

Paul

Sent from my iPad

> On Jun 22, 2015, at 4:05 PM, "Jamie Gaskin" <jgaskin@unitedwaygenesee.org> wrote:
>
> Mr. Hillegonds:
>
> I have attached the proposal from the United Way of Genesee County to the MI Health Endowment Fund. Per our conversation I am also ccing this application to Amy Hovey, District Chief of Staff, Congressman Dan Kildee. Please feel free to contact me with any questions or additional documents that may be needed such as 990's or Audits. Thanks again so much for any advocacy you can provide.
>
> James Gaskin
> CEO
> United Way of Genesee County
>
> From: Jamie-Lee Venable
> Sent: Monday, June 22, 2015 3:53 PM
> To: Jamie Gaskin
> Subject: United Way of Genesee County Proposal
>
>
>
> Jamie-Lee Venable
> Director, Community Impact
> United Way of Genesee County and BEST Project
> 111 E Court St, Suite 3A, Flint MI 48502
> Direct Line: [redacted]
>
>
>
> <Attachment A Brochure.pdf>
> <Attachment B Program Budget.xlsx>
> <Attachment C Support Letters.pdf>
> <Attachment D City Ordinance.pdf>
> <Water Proposal.docx>

~~
Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw Street
Flint, Michigan 48502
810-766-7346
mayor@cityofflint.com

www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

--
Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
[redacted]
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Wyant, Dan (DEQ)
Sent: Wednesday, July 22, 2015 3:08 PM
To: Muchmore, Dennis (GOV)
Cc: Hollins, Harvey (GOV)
Subject: Re: Flint

Will do.

Sent from my iPhone

> On Jul 22, 2015, at 3:05 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>
> I'm frustrated by the water issue in Flint. I really don't think people are getting the benefit of the doubt. Now they are concerned and rightfully so about the lead level studies they are receiving from the DEQ samples. Can you take a moment out of your impossible schedule to personally take a look at this? These folks are scared and worried about the health impacts and they are basically getting blown off by us (as a state we're just not sympathizing with their plight).

From: Hollins, Harvey (GOV)
Sent: Thursday, July 23, 2015 7:46 AM
To: Muchmore, Dennis (GOV)
Subject: Re: '20150722_Meeting with Flint's Clean Water Coalition'

I have a call with Wyant today.

Best,
Harvey Hollins III, Director
Governor's Office of Urban Initiatives

313.456.4994 (office)
[redacted]

On Jul 23, 2015, at 7:21 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> Talked with Saxton, workman, and Lyon about the issues. Collecting the info and then we'll see where it all stands.
>
> Sent from my iPhone
>
> On Jul 22, 2015, at 4:49 PM, Hollins, Harvey (GOV) <hollinsh@michigan.gov> wrote:
>
> > Chief,
> > Just got a call from Wendy re the notes from the Flint meeting. I took a picture of your notes and sent them to you via text. Attached is a copy of my notes.
> >
> > <20150722_Meeting with Flint's Clean Water Coalition.docx>
> >
> > Best,
> > Harvey Hollins III, Director
> > Governorâ€™s Office of Urban Initiatives
> >
> > 313.456.4994 (office)
> > [redacted]

From: Hollins, Harvey (GOV)
Sent: Friday, July 31, 2015 11:54 AM
To: Muchmore, Dennis (GOV)
Subject: Fwd: Meijer

It would be cool if the Gov sends Mark Murray a short note of thanks.

Best,
Harvey

Begin forwarded message:

> **From:** Bob Richardson Jr <[redacted]
> **Date:** July 31, 2015 at 11:44:53 AM EDT
> **To:** "Clayton, Stacie (GOV)" <claytons3@michigan.gov>, Mary.Anne Hogan Johnson [redacted]
> **Cc:** "Akemann, Jamie" <Jamie.Akemann@meijer.com>, "Mears, Scott" [redacted], Alyssa Wisenor [redacted] "Stephen Hardy" [redacted], "Rolland, Heather" <[redacted] "Hollins, Harvey (GOV)" <[redacted] "Behler, Stacie" <[redacted]
> **Subject: RE: Meijer**
>
> Mary Anne
>
> Thanks for making this happen
>
> Bob Richardson
> Director Of Sales, Customer and Industry Development
> Bus:972-871-6721 Cell: [redacted]
>
> -----Original Message-----
> From: Clayton, Stacie (GOV) [mailto:claytons3@michigan.gov]
> Sent: Friday, July 31, 2015 10:36 AM
> To: Mary.Anne Hogan Johnson
> Cc: Akemann, Jamie; Bob Richardson Jr; Mears, Scott; Alyssa Wisenor; Stephen Hardy; Rolland, Heather; Hollins, Harvey (GOV); Behler, Stacie
> Subject: Re: Meijer
>
> Thank you so much. Have a wonderful weekend!
>
> Stacie Clayton
> Sent from my iPhone
>
> On Jul 31, 2015, at 11:21 AM, Mary.Anne Hogan Johnson [redacted] wrote:

Hello Stacie,

We will order the product today for delivery after Tuesday. We will let you know the exact date and the tracking information when available.

Thank you.

-----Original Message-----

From: Clayton, Stacie (GOV) [mailto:claytons3@michigan.gov]

Sent: Friday, July 31, 2015 9:55 AM

To: Akemann, Jamie

Cc: Bob Richardson Jr; Mears, Scott; Mary.Anne Hogan Johnson; Alyssa Wisenor; Stephen Hardy; Rolland, Heather; Hollins, Harvey (GOV); Behler, Stacie

Subject: Re: Meijer

Good Morning All,

Thank you, again.

Is it possible to delay the shipment of the filters until next Tuesday, August 4?

I was just informed they are creating a distribution plan in Flint so the filters can be given to the community when received. This will alleviate the church having to store the filters.

I apologize for not communicating this sooner. Please let me know if the delay is possible.

Stacie Clayton

Sent from my iPhone

On Jul 31, 2015, at 7:40 AM, Akemann, Jamie [redacted] wrote:

Good morning,

Below is the address for delivery of the water filters. Please copy Stacie Clayton when they are shipped with a tracking number. She will ensure someone is at the church the day of delivery.

Thanks for the support!

Deliver to:

Pastor Allen Overton
Mt. Carmel Baptist Church
1610 West Pierson Road
Flint, MI 48504
[redacted]

Please let me know if you need anything else from me.

Stacie
313.456.4994 (office)
claytons3@michigan.gov<mailto:claytons3@michigan.gov>

From: Bob Richardson Jr [redacted]
Sent: Tuesday, July 28, 2015 4:17 PM
To: Akemann, Jamie
Cc: Mears, Scott; Mary.Anne Hogan Johnson; Alyssa Wisenor; Stephen Hardy; Bob Richardson Jr
Subject: RE: Meijer
Importance: High

Jamie

Looks like we can support. Alyssa will coordinate with logistics on product.

Thanks much for all Meijer does to support our categories

Bob Richardson
Director Of Sales, Customer and Industry Development
Bus:972-871-6721 Cell: [redacted]

From: Akemann, Jamie [redacted]

Sent: Tuesday, July 28, 2015 1:05 PM

To: Bob Richardson Jr

Cc: Mears, Scott

Subject: Meijer

Bob,

I hope all is well for you and I look forward to seeing you this fall at our vendor summit.

Meijer needs some help supporting the Flint Michigan community and was hoping Clorox can jump in.

They are having some issues with water quality and are looking for a donation of 1500 water filters for drinking water.

Would Clorox consider donating as a silent partner with Meijer?

Please let me know as we want to support the community.

Best Regards,

Jamie

The product ID for a Brita Filter for kitchen faucets is:

Product ID 3176421

UPC 7-23987-0078

<image001.png>

Jamie Akemann

Vice President Hardlines

2350 3 Mile Road NW l Grand Rapids, MI 49544

P: (616) 791-3082 C: [redacted]

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From: do-not-reply@detroitnews.com
Sent: Monday, August 03, 2015 11:49 AM
To: Muchmore, Dennis (GOV)
Subject: dennis muchmore has sent you - Flint pastors tell residents to get their water tested - from Detroit News

Message from: muchmored@michigan.gov

Flint pastors tell residents to get their water tested

Some area pastors held a rally Sunday to urge residents to get their tap water tested

Check out this story on detroitnews.com: http://detne.ws/1SAH1K6

From: Muchmore, Dennis (GOV)
Sent: Monday, August 03, 2015 5:38 PM
To: Muchmore, Dennis (GOV)
Subject: FW: Updated Memo on Water Coalition Questions - July 29
Attachments: Flint Testing and EBLLs_2.xlsx

For meeting with Pastors and community leaders.

From: Lyon, Nick (DCH)
Sent: Friday, July 31, 2015 10:57 AM
To: Muchmore, Dennis (GOV);
Subject: Re: Updated Memo on Water Coalition Questions - July 29

Our Public Health staff followed up a bit more on the lead question. Below is their email update to me.

From: Grijalva, Nancy (DCH)
Sent: Wednesday, July 29, 2015 11:23 AM
To: Lyon, Nick (DCH)
Subject: FW: Director's Office Assignment -- Flint - need update asap
FYI.....
-----Original Message-----
From: Peeler, Nancy (DCH)
Sent: Tuesday, July 28, 2015 2:57 PM
To: Anderson, Paula (DCH); Miller, Corinne (DCH); Travis, Rashmi (DCH); Moran, Susan (DCH); Grijalva, Nancy (DCH); Fink, Brenda (DCH)
Cc: Priem, Wesley F. (DCH); Dykema, Linda D. (DCH); Bouters, Janese (DCH); Barr, Jacqui (DCH)

Subject: RE: Director's Office Assignment -- Flint - need update asap

I apologize for the delay in responding more specifically to this assignment, it took some time to review our Childhood Lead Poisoning Prevention program data to see if it might contribute to the understanding of the situation in Flint with their water supply. Here is what we found:

We looked at lead testing results for May 2014-April 2015, which is the 12 month time frame just after Flint started drawing their water from the river (water source changed in April 2014).

We compared lead testing rates and lead testing results to the same time frame for the previous 3 years, to see if there were any patterns that suggested that there were increased rates of lead poisoning after the water supply was switched. Per the attached charts –

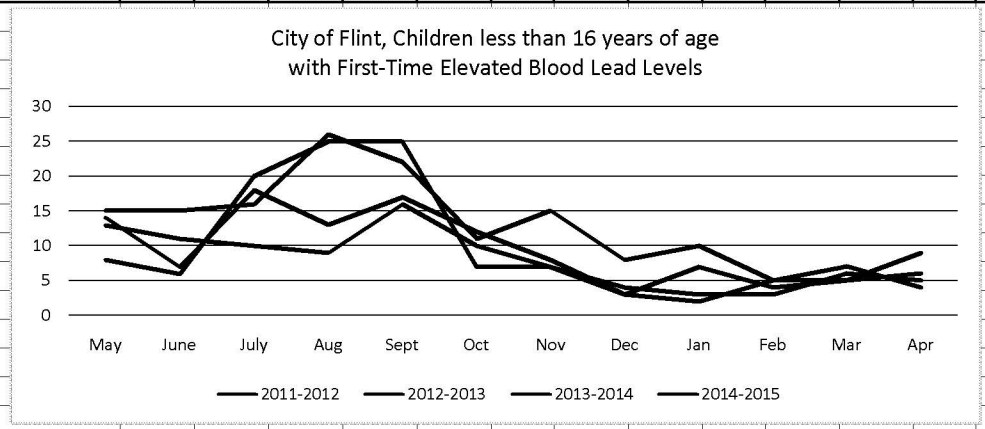
- Lead testing rates remained about the same from year to year (chart on the right).
- There was a spike in elevated blood lead tests from July-September 2014 (chart on the left, gold line).
- However that pattern was not terribly different from what we saw in the previous three years, especially in 2011-2012 (we are working with our Epidemiologist to statistically verify any significant differences).
- We commonly see a 'seasonal effect' with lead, related to people opening and closing windows more

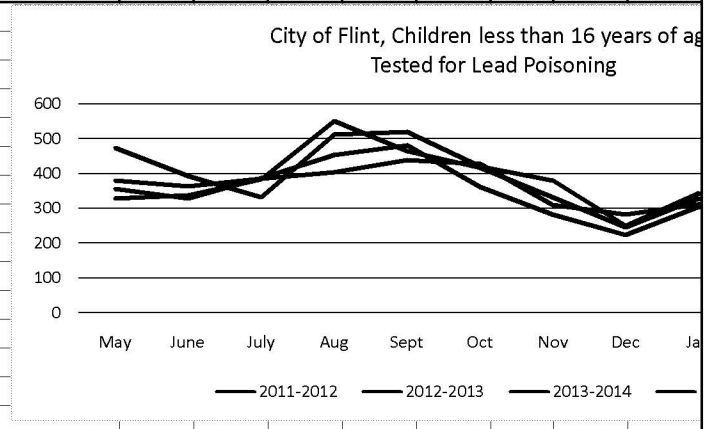
often in the summer, which disturbs old deteriorating paint on the windows, sills and sashes. Window fans frequently blow and spread the lead dust from the deteriorating paint to other parts of the room/house. We suspect that the summer data spike may be related to this effect.

- If the home water supply lines and/or river water were contributing to elevated blood lead tests, we expected that the increased rates would extend beyond the summer, but they drop quite a bit from September to October, stayed low over the winter, and are just starting to tail up again in the spring of 2015.

So upon review, we don't believe our data demonstrates an increase in lead poisoning rates that might be attributable to the change in water source for Flint. We recognize that lead exposure via the water is only a small piece of what may be happening for families in Flint, however, we hope the information is helpful.

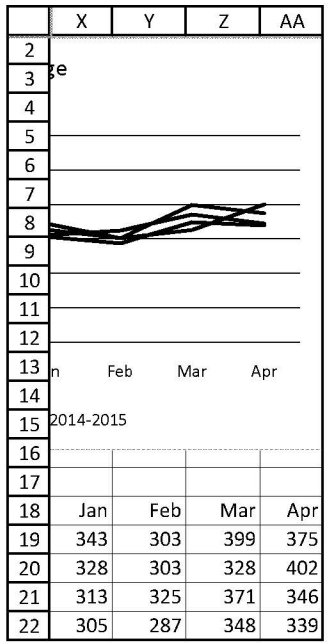
Nancy Peeler





		May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
2011-2012		15	15	16	26	22	11	15	8	10	5	7	4
2012-2013		14	7	18	13	17	12	8	3	7	4	5	6
2013-2014		13	11	10	9	16	10	7	4	3	3	6	5
2014-2015		8	6	20	25	25	7	7	3	2	5	5	9

		May	June	July	Aug	Sept	Oct	Nov	Dec
2011-2012		474	393	332	513	520	420	379	249
2012-2013		328	338	383	550	464	417	332	246
2013-2014		380	363	385	404	438	427	310	283
2014-2015		356	329	386	452	480	361	283	224



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20	328	303	328	402
21	313	325	371	346
22	305	287	348	339

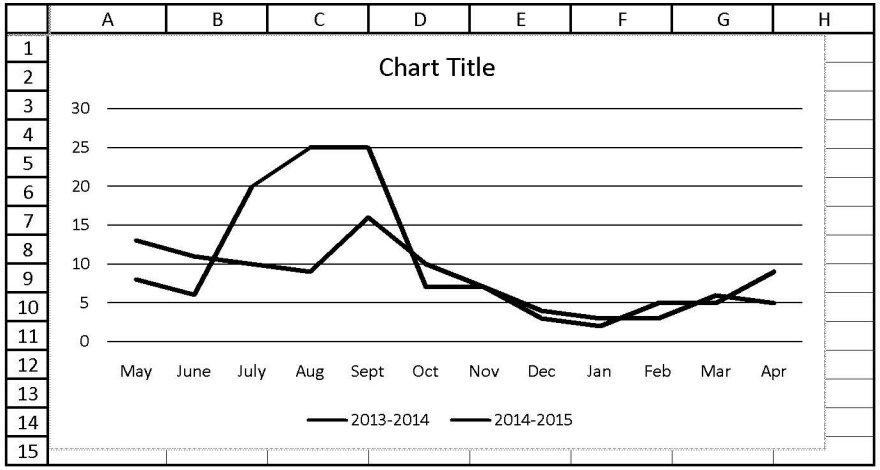
Chart Title
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2013-2014
2014-2015

From: Hollins, Harvey (GOV)
Sent: Wednesday, August 05, 2015 11:50 AM
To: Muchmore, Dennis (GOV)
Cc: Clayton, Stacie (GOV)
Subject: Re: '20150804_Meeting with Flint's Clean Water Coalition'

I agree. It's hard to get to yes or satisfaction with certain types of community advocates because no matter what you do, they will always grind an ax on something.

The reason why I did not want to discuss the kitchen filters is that the Clean Water folks, not the pastors, expressed the following issues re the filters at a meeting Overton held last week:

* The Concerned Pastors group would like filters to go only to low income families. The Coalition for Clean Water believes anyone should be able to get the filters since everyone drinks the same water no matter income.
* The Coalition believes 1500 is not nearly an adequate number to address the problem. The Pastors want to work with what they have right now and address getting more later.
* The Coalition does not consider the filters a form of relief.

Three churches will get 500 kitchen filters each to distribute to residents of Flint in need. How the pastors determine need is not our problem. Also, the talking point I gave Overton and Harris yesterday on media inquiries about the source of the filters is: 1) the donor wishes to remain anonymous; and 2) the Concerned pastors continues to work with philanthropic, corporate, federal, state and local officials to improve the quality of life for residents in the city of Flint. Now whether they use those talking point is another thing.

Re KWA. It's not what the system can produce, it's what the city wants to purchase, and they are purchasing, to my understanding, 18million gals/day. The KWA will supply to county as well.

The untreated KWA water will be mixed with the Flint River at the treatment facility. Six to eight million gals will be siphoned off from the untreated line to industry...including GM before mixing occurs at the Flint treatment facility. As a result, GM will not get Flint River water. Again this is the discussion, and I will verify the process.

I agree, I think one more meeting with the pastors and maybe the professor from Kettering (who I think is reasonable) to put closure on the outstanding questions is warranted. The other women who were there to argue for the sake of arguing should not be apart of that meeting.

Regarding more state money to Flint or democracy discussions on the question of emergency management isn't something that I have too much of an appetite for.

Best,
Harvey Hollins III, Director
Governor's Office of Urban Initiatives

313.456.4994 (office)

[redacted]

On Aug 5, 2015, at 9:03 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

I didn't think that meeting was as useful as others. If people won't accept the factual information, I'm not sure there is much we can do about it. They're getting their own filters, we've installed six at the main and I thought there were six more coming. As for the flushing, that's part of any city's water system, and people in every community pay for it. As to the frequency, there must be a plan to reduce the number of times.

Questions:
Why does KWA only produce 18 million gals? Doesn't make sense to have a system that doesn't produce enough water.
Where do they expect to get the other from? Especially since GM doesn't want the Flint river water (even though presumably GM has been both the biggest commercial user and disposer), how do they separate out the flow?

We can't do too many more of these. The three activists in the room just want to be right, they don't want answers. No matter what we say they'll always want something else to be the answer. The Pastors and the woman form yesterday who usually sits across from me and who always lectures us (that's just a reminder of some of the old time negative racial experiences she's had and I get it) are really a strong group of people. Usually there is a black woman who comes with them, but I missed her yesterday. I really her and of course, Overton and Hill are pretty impressive people in their own right.

From: Hollins, Harvey (GOV)
Sent: Wednesday, August 5, 2015 8:32 AM
To: Muchmore, Dennis (GOV)
Cc: Clayton, Stacie (GOV)
Subject: '20150804_Meeting with Flint's Clean Water Coalition'

From: Wurfel, Brad (DEQ)
Sent: Thursday, September 03, 2015 12:31 PM
To: Hollins, Harvey (GOV); Muchmore, Dennis (GOV)
Subject: FW: lead in flint water

Wanted you both to see what I sent to the Flint Journal. Because only one sentence of it made it into the Flint Journal.
b

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 02, 2015 3:28 PM
To: 'Ronald Fonger'
Subject: RE: lead in flint water

Here's a response from the DEQ. Attribute to me. Call me if you have further questions. Thanks, Ron.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
[redacted]

We are aware that Virginia Tech researchers are now testing water at various Flint homes for lead levels. We appreciate that Virginia Tech's team is working on this issue because it brings the public spotlight on an important fact: if you have lead water pipes or plumbing fixtures containing lead in your home, or a lead service connection to the city system, it is very likely you are ingesting some level of lead. That's just a fact. It's true whether you live in Detroit, Dowagiac or Decatur.

And in the City of Flint, that fact affects 15,000 or more residences.

However, we want to be very clear that the lead levels being detected in Flint drinking water are not coming from the treatment plant or the city's transmission lines. Treated water leaving the plant has no detectable levels of lead in it. The issue is how, whether, and to what extent the drinking water is interacting with lead plumbing in people's homes.

It does not appear the Virginia Tech research lab is certified, and we can't speak to the sampling methods being employed to achieve these results. The results reported so far fail to track with any of the lead sampling conducted by the city. In addition, the Virginia Tech results are not reflected by the blood lead level testing regularly conducted by the state department of community health that have not shown any change since Flint switched sources.

The state's compliance monitoring program requires the city to use certified laboratories and a standardized, federal testing protocol that looks specifically at the homes in communities most likely to experience lead problems. The latest results from Flint, obtained from two separate rounds of testing over the past year, indicated that Flint drinking water, meets state and federal safe drinking water standards for lead.

That said, the state has requested Flint to 'optimize' its water treatment to further limit exposure to lead from plumbing in homes. While statute allows several years for a drinking water system to actually undertake this process – Detroit took five years to complete its water optimization work – we are encouraging Flint water system operators to take these steps immediately and we are encouraged by the conversation so far.

Any resident who has concerns about lead in their drinking water should have their water tested at a certified laboratory and get professional consultation on how to address it. The leading cause of lead poisoning is known to be lead paint and, in some areas, environmental legacy hot spots where lead is present in soils. However, I will say it again: when homes are fitted with lead plumbing or plumbing fixtures containing lead, homeowners should assume there is some varied level of interaction between water and pipes that results in lead exposure.
b

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Wednesday, September 02, 2015 11:40 AM
To: Wurfel, Brad (DEQ)
Subject: RE: lead in flint water

Brad:
If needed, here is the link to what's been posted today.
I spoke with Dr. Marc Edwards, who is overseeing the research.
http://flintwaterstudy.org/

Ron Fonger
MLive Media Group
Reporter

[redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Brad (DEQ) [mailto:WurfelB@michigan.gov]
Sent: Wednesday, September 02, 2015 11:37 AM
To: Ronald Fonger
Subject: RE: lead in flint water

Ron, thank you for reaching out. We definitely want to clarify some important points here. Give me a few to read this and pull together some stuff for you.
Again, THANKS!!!
b

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Wednesday, September 02, 2015 11:34 AM
To: Wurfel, Brad (DEQ)
Cc: Kristin Longley; Bryn Mickle
Subject: lead in flint water

Brad:
I left a message with Mike Prysby on Tuesday, Sept. 1, but wanted to reach out to you also because of stories we are working on about the extent to which lead is becoming an issue in Flint drinking water.
Today, Sept. 2, researchers at Virginia Tech posted the results on an experiment with Flint water online. The report concludes that Flint River water leaches much more lead from plumbing than does Detroit.
"On average, Detroit water is 12 times (or 12X) less corrosive than the Flint River water currently in use … This is creating a public health threat in some Flint homes that have lead pipe or lead solder," the report says.
An earlier post by the same researchers says that initial water tests show "a serious lead in water problem" in Flint, partly because Flint River water is so corrosive to pipes.
Given the state's role in oversight of the city's drinking water system through DEQ and its overall oversight by state emergency managers during the past several years, I wanted to make sure I'm reaching out to the right person to respond to this information.
Could you let me know who that is?
I expect to post the first story about the experiment today and expect the issue will be getting more attention as the VT study of 300 water test kits from Flint is completed.
Thanks,

Ron Fonger
MLive Media Group
Reporter

[redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

Subject: HH/DM Meeting
Location: DM's Office

Start: Wed 9/9/2015 10:00 AM
End: Wed 9/9/2015 10:15 AM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Clayton, Stacie (GOV)
Required Attendees: Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Wendy Wisniewski (WisniewskiW@michigan.gov)

Regarding: 1) [redacted]; 2) Flint and water filters

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 09, 2015 10:09 PM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Wyant, Dan (DEQ); Pallone, Maggie (DEQ)
Subject: Fwd: Congressman Kildee Letter on Lead in Flint Water
Attachments: ATT00001.htm; ATT00002.htm; ATT00003.htm; ATT00004.htm; 2015-09-09-Congressman Kildee Letter on Lead in Flint Water.pdf; ATT00005.htm

Liane, need your team's help. We'll need a draft response, and possibly a briefing for the director tomorrow. I'll find you in the morning. Thanks!
b

Sent from my iPhone

Begin forwarded message:

> **From:** "Dickinson, Jordan" <Jordan.Dickinson@mail.house.gov>
> **Date:** September 9, 2015 at 6:54:47 PM EDT
> **To:** "Wurfelb@michigan.gov" <Wurfelb@michigan.gov>
> **Subject: FW: Congressman Kildee Letter on Lead in Flint Water**
>
> Hi Brad,
>
> Can you please make sure the attached letter is passed along to Director Wyant? I will forward along a physical copy in the mail.
>
> Thank you,
>
> **Jordan Dickinson**
> Legislative Assistant
> Congressman Dan Kildee (MI-05)
> 227 Cannon House Office Building
> Washington, D.C. 20515
> Phone: [redacted]
> www.dankildee.house.gov

DANIEL T. KILDEE
5TH DISTRICT, MICHIGAN

COMMITTEE ON
FINANCIAL SERVICES

SUBCOMMITTEE ON
HOUSING AND INSURANCE

SUBCOMMITTEE ON
MONETARY POLICY AND TRADE

SENIOR WHIP

DEMOCRATIC POLICY AND
COMMUNICATIONS COMMITTEE

Congress of the United States
House of Representatives
Washington, DC 20515

September 9, 2015

WASHINGTON OFFICE

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(202) 225-3611
(202) 225-6393 (FAX)

DISTRICT OFFICE

111 EAST COURT STREET #3B
FLINT, MI 48502
(810) 238-8627
(810) 238-8658 (FAX)

WWW.DANKILDEE.HOUSE.GOV
/REPDANKILDEE
@REPDANKILDEE

Ms. Gina McCarthy
Administrator
Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Mr. Dan Wyant
Director
Michigan Department of Environmental Quality
P.O. Box 30473
Lansing, MI 48909

Administrator McCarthy and Director Wyant:

The attached June 24, 2015, memorandum between two Environmental Protection Agency (EPA) employees, Miguel A. Del Toral and Thomas Poy, published recently by the American Civil Liberties Union of Michigan, suggests that there are high lead levels in the city of Flint, Mich., water transmission lines. Furthermore, this document reflects that children consuming this water had levels of lead in their blood in excess of three times what they were prior to the city of Flint switching its source water from the Detroit Water and Sewage Department (DWSD) to the Flint River.

In addition, this memorandum makes recommendations to Mr. Poy, Chief of the Ground Water and Drinking Water Branch of EPA Region 5, to do three things. First, for the EPA to work with the Michigan Department of Environmental Quality (MDEQ) to provide technical assistance to the city of Flint to deal with water quality issues. Second, it suggests the EPA review the compliance status of the city of Flint in respect to its compliance with the Lead and Copper Rule (LCR). Third, the memorandum recommends that the EPA conduct a review of the city of Flint testing procedures to ensure they are compliant with the LCR.

Regarding this memorandum and the surrounding water quality issues in the city of Flint, I have the following questions:

- Was this memorandum actually sent to Mr. Poy?

- Are the findings in the memorandum regarding the lead levels in the city of Flint water accurate?

- If there were in fact high levels of lead in the water in the city of Flint, when did the EPA and/or MDEQ plan to alert the public?

- What, if any, of the recommendations has the EPA followed from the memorandum?

- Given the demonstrated level of lead in the water in Flint, MI, is the water safe?

Regardless, I am very troubled by recent tests suggesting high levels of lead in the city of Flint's water system. As you know, on the EPA's website it says that lead above the "action level" in drinking water can cause a variety of adverse health effects, including delays in physical and mental development in babies and children.

According to the Safe Drinking Water Act, the EPA has the responsibility of enforcing water quality standards. EPA, however, has given the primary responsibility of enforcing water quality standards to the state of Michigan via MDEQ. As such, it is the responsibility of these agencies to ensure that the people of the city of Flint have safe drinking water.

Thank you and I look forward to hearing from you soon.

Sincerely,

Dan Kildee
MEMBER OF CONGRESS

cc:

State Senator Jim Ananich
State Representative Sheldon Neeley
State Representative Phil Phelps
Mayor Dayne Walling, City of Flint
Howard Croft, City of Flint
Susan Hedman, EPA
Thomas Poy, EPA
Michael Schock, EPA-ORD
Darren Lytle, EPA-ORD
Denise Fortin, EPA
Liane Shekter-Smith, MDEQ
Pat Cook, MDEQ
Stephen Busch, MDEQ
Brad Wurfel, MDEQ
Marc Edwards, Virginia Tech

From: Hollins, Harvey (GOV)
Sent: Monday, September 14, 2015 3:44 PM
To: Muchmore, Dennis (GOV)
Subject: Re: PRESS RELEASE: Special Presentation to City Council on Water

To raise hell is my best response to your question.

I participated in one of these informational this past spring, and it was chaotic. I hope DEQ did not set this up; if it's like the one I went to, the residents will come loaded for bear.

On Sep 14, 2015, at 1:33 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> Why would anyone participate in this one except for informational purposes?
>
> ---
>
> **From:** Muchmore, Dennis (GOV)
> **Sent:** Monday, September 14, 2015 1:32 PM
> **To:** Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Pallone, Maggie (DEQ) <PalloneM@michigan.gov>
> **Subject:** FW: PRESS RELEASE: Special Presentation to City Council on Water
>
> FYI. Is this your meeting?
>
> **From:** Jason Lorenz [mailto:jlorenz@cityofflint.com]
> **Sent:** Monday, September 14, 2015 9:09 AM
> **Subject:** PRESS RELEASE: Special Presentation to City Council on Water
>
> **For Immediate Release**
>
> ## Special Presentation to City Council on Water to be Included in City Council Meeting Agenda for Monday, September 14, 2015
>
> ***Flint, Michigan – September 14, 2015*** – The agenda for the regular City Council meeting scheduled for Monday, September 14, 2015 at 6:00pm will include a special presentation to update residents on water. The presentation will include the steps taken thus far to address the quality, safety and affordability of the water as well as upcoming plans to make improvements to the water system. This is a public meeting and residents are encouraged to attend.

–END–

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039 (Office)
[redacted]
jlorenz@cityofflint.com

<City Council Meeting Water Presentation 9.14.15.pdf>

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Wednesday, September 16, 2015 8:09 PM
To: Muchmore, Dennis (GOV)
Subject: Re: EPA's response to Rep. Kildee re: Flint water

Thanks, Dennis. I do not see the attached EPA letter? I do see the DEQ letter to Kildee in the other email.

Also, do you have the letter from DEQ to Jim?

On 9/16/15, 6:14 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
wrote:

>
>
>Sent from my iPhone
>
>Begin forwarded message:
>
>From: "Wurfel, Brad (DEQ)"
><WurfelB@michigan.gov<mailto:WurfelB@michigan.gov>>
>Date: September 16, 2015 at 4:25:08 PM EDT
>To: "Hollins, Harvey (GOV)"
><hollinsh@michigan.gov<mailto:hollinsh@michigan.gov>>, "Muchmore,
>Dennis (GOV)" <muchmored@michigan.gov<mailto:muchmored@michigan.gov>>
>
>Subject: FW: EPA's response to Rep. Kildee re: Flint water
>
>Heads up, here's the official response on Flint water inquiry from EPA
>to Cong. Kildee. It went last night.
>Our formal response is going out COB today, will send around the
>finalized but not yet sent version in just a moment so you've got it.
>If you have questions, call my cell phone, please. Thanks!
>b
>
>
>Brad Wurfel
>Communications Director
>Michigan Department of Environmental Quality
>[redacted]
>[redacted]
>
>
>
>From: Pallone, Maggie (DEQ)
>Sent: Tuesday, September 15, 2015 7:25 PM
>To: Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Howes, Sarah (DEQ);
>Wurfel, Brad (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ);
>Shekter Smith, Liane (DEQ); Sygo, Jim (DEQ)

>Subject: Fwd: EPA's response to Rep. Kildee re: Flint water
>
>
>
>
>Begin forwarded message:
>From: "Fortin, Denise"
><Fortin.Denise@epa.gov<mailto:Fortin.Denise@epa.gov>>
>Date: September 15, 2015 at 6:28:38 PM EDT
>To: "Pallone, Maggie (DEQ)"
><PalloneM@michigan.gov<mailto:PalloneM@michigan.gov>>
>Cc: "Beckmann, Ronna Erin"
><beckmann.ronna@epa.gov<mailto:beckmann.ronna@epa.gov>>, "Deamer, Eileen"
><deamer.eileen@epa.gov<mailto:deamer.eileen@epa.gov>>
>Subject: EPA's response to Rep. Kildee re: Flint water Here you go,
>Maggie. I'll be sending this letter to Jordan Dickinson shortly.
>
>Please keep me posted on the location for Monday's meeting.
>
>Thanks,
>Denise
>
>Denise Fortin
>Congressional Liaison
>Office of Regional Administrator
>U.S. Environmental Protection Agency
>[redacted]

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Thursday, September 17, 2015 11:11 AM
To: Muchmore, Dennis (GOV)
Subject: Re: EPA's response to Rep. Kildee re: Flint water

Thanks, do you have a copy of the DEQ to Jim letter?

Sent from my iPhone

On Sep 17, 2015, at 11:05 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> Sorry, here's the EPA letter to Dan.
>
> **From:** Wurfel, Brad (DEQ)
> **Sent:** Wednesday, September 16, 2015 4:25 PM
> **To:** Brown, Eric (GOV) <BrownE15@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>
> **Cc:** Brown, Jessica (GOV) <BrownJ53@michigan.gov>; Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>
> **Subject:** FW: EPA's response to Rep. Kildee re: Flint water
>
> Heads up, here's the official response on Flint water inquiry from EPA to Cong. Kildee. It went last night.
> Our formal response is going out COB today, will send around the finalized but not yet sent version in just a moment so you've got it.
> If you have questions, call my cell phone, please. Thanks!
> b
>
> Brad Wurfel
> Communications Director
> Michigan Department of Environmental Quality
> [redacted]
>
> **From:** Pallone, Maggie (DEQ)
> **Sent:** Tuesday, September 15, 2015 7:25 PM
> **To:** Wyant, Dan (DEQ); Thelen, Mary Beth (DEQ); Howes, Sarah (DEQ); Wurfel, Brad (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Sygo, Jim (DEQ)
> **Subject:** Fwd: EPA's response to Rep. Kildee re: Flint water
>
> Begin forwarded message:

From: "Fortin, Denise" <Fortin.Denise@epa.gov>
Date: September 15, 2015 at 6:28:38 PM EDT
To: "Pallone, Maggie (DEQ)" <PalloneM@michigan.gov>
Cc: "Beckmann, Ronna Erin" <beckmann.ronna@epa.gov>, "Deamer, Eileen" <deamer.eileen@epa.gov>
Subject: EPA's response to Rep. Kildee re: Flint water

Here you go, Maggie. I'll be sending this letter to Jordan Dickinson shortly.

Please keep me posted on the location for Monday's meeting.

Thanks,
Denise

Denise Fortin
Congressional Liaison
Office of Regional Administrator
U.S. Environmental Protection Agency
[redacted]

<Hon. Daniel Kildee 09-15-15.pdf>

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Tuesday, September 22, 2015 4:31 PM
To: Muchmore, Dennis (GOV)
Subject: Re: Independent Water Analysis - Flint

Why don't just you and I meet tomorrow and spend an hour solving this issue? We can argue about who is to blame after we do everything we can to protect the infants and children in Flint. I am supposed to be in Flint all day but I could clear most of it and be here by 11am.

From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Date: Tuesday, September 22, 2015 at 4:15 PM
To: Andy Leavitt <aleavitt@senate.michigan.gov>
Subject: FW: Independent Water Analysis - Flint

Another old article so you have what I have.

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Tuesday, September 22, 2015 4:38 PM
To: Muchmore, Dennis (GOV)
Subject: Re: Independent Water Analysis - Flint

Sounds perfect. Kewpees it is.

Thank you.

From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Date: Tuesday, September 22, 2015 at 4:34 PM
To: Andy Leavitt <aleavitt@senate.michigan.gov>
Subject: RE: Independent Water Analysis - Flint

Actually I don't think anyone is to blame, it's just a complicated situation that will not get much better until KWA is up and running. I'll see you tomorrow at 11:00. How about if I buy you lunch, someplace ritzy like Kewpees or Arts?

From: Andrew Leavitt [mailto:ALeavitt@senate.michigan.gov]
Sent: Tuesday, September 22, 2015 4:31 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Re: Independent Water Analysis - Flint

Why don't just you and I meet tomorrow and spend an hour solving this issue? We can argue about who is to blame after we do everything we can to protect the infants and children in Flint. I am supposed to be in Flint all day but I could clear most of it and be here by 11am.

From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Date: Tuesday, September 22, 2015 at 4:15 PM
To: Andy Leavitt <aleavitt@senate.michigan.gov>
Subject: FW: Independent Water Analysis - Flint

Another old article so you have what I have.

From: Clement, Elizabeth (GOV)
Sent: Wednesday, September 23, 2015 1:40 PM
To: Muchmore, Dennis (GOV)
Subject: Re: Andy Leavitt

Thanks!

Sent from my iPad

On Sep 23, 2015, at 1:24 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> Don't forget to call andy about the supposed Flint chase and also talk about the DHHS and the controversy with lead based blood samples allegedly from water.

From: Murray, David (GOV)
Sent: Thursday, September 24, 2015 2:09 PM
To: Muchmore, Dennis (GOV)
Subject: Accepted: Conf Call re Flint Water

From: Busch, Stephen (DEQ)
Sent: Thursday, September 24, 2015 2:12 PM
To: Muchmore, Dennis (GOV)
Subject: Accepted: FW: Conf Call re Flint Water

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Wednesday, September 30, 2015 9:25 AM
To: Muchmore, Dennis (GOV)
Subject: Re: Progress Michigan

I don't know what they said so I can't speak to denouncing them. But everyday of inaction compounds the politics of this issue. We have secured around 30 thousand dollars for a filter program from several UAW VPs as well as 50k from GM. We are still waiting on a state emergency professional to help our community react professionally and promptly. The only person I have heard from since Monday's call is Director Wyatt and he has been asking good questions and seems like he recognizes a problem and wants solutions.

I say all that to say, we are happy to quiet critics and we think the best way to do that is progress. I feel like we offered several easy steps last week that would have shown prompt action and none of that has been realized. Further, we have seen DHHS working to discredit the pediatricians in our community rather than work to help the most vulnerable.

I would prefer you and I talk about this daily so we are working together but I have called you and Beth each twice with no return. I know we are all busy but I hope you will agree that more communication during,what we view as a crisis, is the best way to keep us moving forward together.

Sent from my iPhone

On Sep 30, 2015, at 9:09 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> I assume these jerks don't represent the Minority Leader but it would be nice to see a public denunciation of them from him. I'm sure they didn't volunteer any help to the Flint people or put any effort into alleviating the difficulties the city finds itself in since they never do anything positive.

From: Saxton, Thomas (Treasury)
Sent: Thursday, October 01, 2015 8:26 PM
To: Muchmore, Dennis (GOV); Khouri, Nick (TREASURY)
Cc: Workman, Wayne (TREASURY); Stanton, Terry A. (Treasury)
Subject: Fw: follow up

Importance: High

Follow Up Flag: Follow up
Flag Status: Completed

Dennis - in response to your earlier email; Wayne's guys came up with a ballpark estimate for reconnecting to DWSD. Let me emphasize 'ballpark'. They used your assumptions & they talked to Natasha H. after 5:00. Bottom line... the estimated cost is approx $10.5mm to reconnect until June '16.
These numbers on their surface seem much improved over previous DWSD $offers. [Is Daddow in the loop on this ?] We need to give some more thought as to whether this is all inclusive. e.g., there might be some costs from turning down operations at the plant

I am being told this can happen in a relatively short time i.e., less than a week. Which seems aggressive. Obviously that does not mean the lead concerns nor discolored water, etc goes away in a week. The pipe section they sold to the county won't be an impediment to this deal.

There apparently are no 'upfront' costs we need to worry about. In theory, it seems like it can be paid over the 9-10 months (vs a lump sum). But I am not clear Dennis on those couple ideas/sources the Mayor & Senator mentioned i.e., at this point I am not sure where the $10.5mm comes from.

My guess is we will keep refining this estimate. Let us know if you need anything else. Again, "credit " Wayne's guys for pulling this together quickly.

From: Cline, Richard (Treasury)
Sent: Thursday, October 1, 2015 6:08 PM
To: Saxton, Thomas (Treasury); Koryzno, Edward (Treasury); Byrne, Randall (Treasury)
Subject: RE: follow up

City's usage is 14 MGD/Day

Timeline is 9 months until June 2016

Fixed Cost is $662,100 for 9 months or $5,958,900

Commodity Rate is $501,383/month

Total Monthly Cost is $1,163,483

Cost until June 2016 is $10,471,347

The City does not know the cost to move the water plant into stand-by mode. However, they have indicated that there might be some reduced costs as lower chemical costs will be incurred.

Eric Cline | Department Manager | State of Michigan
Michigan Department of Treasury | Local Government Financial Services Division | Fiscal Responsibility Section
430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
Lansing Office (517) 335-2078 | [redacted] | Traverse City Office (231) 922-5228
E-mail clinerl@michigan.gov

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From: Saxton, Thomas (Treasury)
Sent: Thursday, October 01, 2015 6:01 PM
To: Cline, Richard (Treasury) <clinerl@michigan.gov>; Koryzno, Edward (Treasury) <KoryznoE@michigan.gov>; Byrne, Randall (Treasury) <ByrneR1@michigan.gov>
Subject: follow up
Importance: High

I am getting ready to leave… what have you learned ?

From: Workman, Wayne (TREASURY)
Sent: Wednesday, October 07, 2015 10:40 AM
To: Saxton, Thomas (Treasury); Stanton, Terry A. (Treasury); Muchmore, Dennis (GOV); Wurfel, Sara (GOV); Wurfel, Brad (DEQ)
Subject: FW: How The Flint Water Crisis Emerged

Finally M Live recognizes that DWSD kicked Flint off the system.

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Widigan, Robert (TREASURY)
Sent: Wednesday, October 07, 2015 10:32 AM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Koryzno, Edward (Treasury) <KoryznoE@michigan.gov>
Cc: Schafer, Suzanne K. (Treasury) <SchaferS7@michigan.gov>
Subject: FW: How The Flint Water Crisis Emerged

This article gives a very detailed and accurate timeline from when the city decided to stop buying water from DWSD to today.

-Rob

From: Widigan, Robert (TREASURY)
Sent: Wednesday, October 07, 2015 10:29 AM
To: Schafer, Suzanne K. (Treasury) <SchaferS7@michigan.gov>; Byrne, Randall (Treasury) <ByrneR1@michigan.gov>; Cline, Richard (Treasury) <cliner1@michigan.gov>
Subject: How The Flint Water Crisis Emerged

The second slide identifies that Detroit terminated the contract with the city:
http://www.mlive.com/news/flint/index.ssf/2015/10/how_the_flint_water_crisis_eme.html#2

Robert Widigan
Local Government Financial Services Division
Michigan Department of Treasury
Office (517) 373-3227 Cell [redacted]

From: Becker, Timothy (DHHS)
Sent: Wednesday, October 07, 2015 1:53 PM
To: Duncan, Nancy (DTMB); Wyant, Dan (DEQ); Khouri, Nick (TREASURY); Saxton, Thomas (Treasury); Lyon, Nick (DHHS); Zimmer, Mike (LARA); Muchmore, Dennis (GOV)
Cc: Pohl, Allan (LARA); Hanley, Farah (DHHS); McNeely, Jacques (DTMB); Harkins, Chris (DTMB); Fosdick, David (DTMB); Kimmith, Dean (DTMB); Shoemaker, Lisa (DTMB); Harrison, Jennifer (DTMB); Roberts, John (DTMB); Starr, Scott (DTMB); Peruchietti, Cindy (Treasury); Epkey, Amy (DEQ)
Subject: RE: DRAFT City of Flint Solution
Attachments: City of Flint Water Funding Solution.pdf

Follow Up Flag: Follow up
Flag Status: Completed

I'm confused by this spreadsheet. At this morning's meeting the supplemental (apart from the filters) discussed was for $6m to reconnect plus $1.5m for 10 FTEs, 8 of which I understood to be in MDHHS for nurse case managers and lead abatement investigators. This spreadsheet seems to be $1.5m short of this morning's conversation. I don't have a funding source for the positions in FY 2016. If we're absorbing within existing resources I'll need a GF transfer and work project to capture FY '15 lapse.

From: Duncan, Nancy (DTMB)
Sent: Wednesday, October 7, 2015 12:14 PM
To: Wyant, Dan (DEQ) <WyantD@michigan.gov>; Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Becker, Timothy (DHHS) <beckert1@michigan.gov>; Lyon, Nick (DHHS) <LyonN2@michigan.gov>; Zimmer, Mike (LARA) <zimmerm@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Cc: Pohl, Allan (LARA) <pohla1@michigan.gov>; Hanley, Farah (DHHS) <hanleyf@michigan.gov>; McNeely, Jacques (DTMB) <mcneelyj@michigan.gov>; Harkins, Chris (DTMB) <HarkinsC1@michigan.gov>; Fosdick, David (DTMB) <FosdickD@michigan.gov>; Kimmith, Dean (DTMB) <KimmithD@michigan.gov>; Shoemaker, Lisa (DTMB) <shoemakerl@michigan.gov>; Harrison, Jennifer (DTMB) <harrisonj1@michigan.gov>; Roberts, John (DTMB) <RobertsJ9@michigan.gov>; Starr, Scott (DTMB) <StarrS1@michigan.gov>; Peruchietti, Cindy (Treasury) <PeruchiettiC@michigan.gov>; Epkey, Amy (DEQ) <epkeya@michigan.gov>
Subject: DRAFT City of Flint Solution
Importance: High

Colleagues,

Please find attached summary of where the State Budget Office believes we are based on this morning's meeting hosted by Director Wyant. This reflects the State commitment of resources towards provision of filters, reconnecting to Detroit Water & Sewage, and home/school/other inspections. Your quick review would be appreciated, since the Governor wants to share with legislative leaders yet today. I have included your budget officers to assist in the review.

Open issues are: (1) where to place the appropriation for the Flint re-connect and (2) whether (and what) boilerplate we may need/want.

Thanks.

Nancy Duncan
Deputy State Budget Director
[redacted]

City of Flint Water - Funding Solution
State of Michigan Commitment

Agency	GF/GP	Gross	Comments
Filters:			
MSHDA		$225,000	Does not require board approval.
Health & Human Services	$1,016,000	$1,016,000	Towards 2nd round of filters. (AY15 work project)
Health & Human Services	$0	$1,000,000	Environmental Quality - State Restricted Settlement Funds provided to HHS Emergency Services local office for 1st round of filters.
Subtotal Filters:	**$1,016,000**	**$2,241,000**	
Reconnect to DSW:			
Environmental Quality	$0	$1,000,000	State Restricted Settlement Fund support.
Health & Human Services	$0	$0	
MI Strategic Fund	$0	TBD	
State Budget Office	$5,000,000	$5,000,000	FY15 general fund lapse resources.
Subtotal Reconnect:	**$5,000,000**	**$6,000,000**	
Additional Agency Support:			
LARA	TBD	TBD	Provision of 5-7 plumbing inspectors to do schools (public and parochial) and health facilities (hospitals, Long Term Care, etc.).
Health & Human Services	TBD	TBD	Provision for home and school inspections. Cost will be absorbed within existing resources.
Environmental Quality	TBD	TBD	Provision of 2 FTEs for home and school inspections. Cost will be absorbed within existing resources.
Subtotal Additional Support:	**$0**	**$0**	
ALL TOTAL	**$6,016,000**	**$8,241,000**	

12:12 PM
10/7/2015

From: MLive | Lansing <mlive.com_newsletters@update.mlive.com>
Sent: Wednesday, October 07, 2015 3:05 PM
To: Muchmore, Dennis (GOV)
Subject: 3 @ 3: Here's how that toxic lead gets into Flint water

View Online

Lansing 3@3
Wednesday, Oct 7, 2015

News | Sports | Business | Entertainment

Here's how that toxic lead gets into Flint water

Right-click here to download pictures. To help protect your privacy, Outlook prevented automatic download of this picture from the Internet.

Ron Fonger | rfonger1@mlive.com

Tests show water leaving Flint's treatment plant is lead free, but by the time it reaches the tap, it sometimes has elevated levels of lead, and here's why.

Read More

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Justin P. Hicks | jhicks3@mlive.com

Michigan State football offers Ann Arbor Pioneer junior Antjuan Simmons

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John Counts | johncounts@mlive.com

Former U-M football player charged with illegally videotaping sex

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Jonathan Oosting | joosting@mlive.com

Cat shot with arrow purrs in recovery, prognosis is 'excellent'

Emily Lawler | elawler@mlive.com

$328,843 Fantasy 5 winner may have lost the ticket

Edward Pevos | epevos@mlive.com

Proposed tax changed as Michigan House preps vote on major medical ...

Jonathan Oosting | joosting@mlive.com

Statewide news

Jennifer Lopez to host American Music Awards

Did You Know: How Saline got its name?

Here's how that toxic lead gets into Flint water

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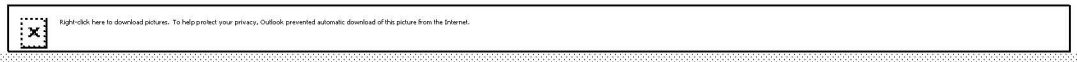

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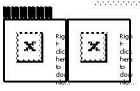

<

From: Deb Muchmore <muchmored@krkm.com>
Sent: Wednesday, October 07, 2015 3:19 PM
To: Muchmore, Dennis (GOV)
Subject: Thought

On Flint, you may want to reach out to Jim Lukaszewski (Luke-ah-sheff-ski) for critical help. I've work a fair bit with him, know him, etc. He could be very helpful on guidance – the issue is getting worse (note Erin Brockovich is now targeting). http://www.e911.com/

The other that I might suggest is Peter Sandman. I've also worked with him – know him, too. He is an outrage management expert. Has a different way of navigating issues and is very well regarded. Different approach than Jim. http://psandman.com/

I think you guys need someone like either/both of these guys to help provide some forest for trees help, messaging help, etc. I don't like the way the issue is being handled, reported, etc. You need some help.

Deborah A. Muchmore | Partner
KANDLER REED KHOURY & MUCHMORE
124 W Allegan | Suite 1700
Lansing, MI 48933
(517) 485-4044 | Office
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From: Roberts, John (DTMB)
Sent: Wednesday, October 07, 2015 9:14 PM
To: Muchmore, Dennis (GOV)
Subject: Re: letter from John O'Brien

Are you ok with the Flint funding request I sent tonight?

John Roberts

On Oct 7, 2015, at 3:32 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> What do you think? We could dedicate some of the funds in the bottle deposit escrow account to this.
>
> ---
>
> **From:** Saxton, Thomas (Treasury)
> **Sent:** Wednesday, October 7, 2015 2:43 PM
> **To:** Wyant, Dan (DEQ) <WyantD@michigan.gov>; Sygo, Jim (DEQ) <SygoJ@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Roberts, John (DTMB) <RobertsJ9@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Lyon, Nick (DHHS) <LyonN2@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>
> **Cc:** Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Duncan, Nancy (DTMB) <duncann1@michigan.gov>
> **Subject:** FW: letter from John O'Brien
> **Importance:** High
>
> Here is the letter from the Genesee Co Drain Commission. My interpretation of the contents would be their estimate is $13.2mm (vs the $12mm discussed this morning).
>
> They included their contract with the City. Sec 5.7 references prevailing rates the City would be charged; that is different than the rates reflected in the $13.2mm. So that contract may need to be modified.
>
> They also raise some other items (under *Procedure to Activate Supply* -- p.3) that may have cost implications.
>
> <SKM_C554e15100712200.pdf>

From: Saxton, Thomas (Treasury)
Sent: Thursday, October 08, 2015 1:17 PM
To: Muchmore, Dennis (GOV); Duncan, Nancy (DTMB)
Cc: Workman, Wayne (TREASURY); Khouri, Nick (TREASURY); Wyant, Dan (DEQ); Baird, Richard (GOV); Roberts, John (DTMB); Hollins, Harvey (GOV)
Subject: RE: letter from John O'Brien

I agree with Dennis… Consistent with what I think we (Wayne & I) said at the DEQ meeting yesterday… the county drain commission has more knowledge & experience running a water system than we (Treasury) do. That is why we were trying to get some outside verification. We were not able to get an outside engineering firm engaged due to the timeframe. Our fallback was Jeff Wright – the drain commissioner. He calculated $13.2mm. We did a 'back of the envelope' analysis of $10.5mm late last week. That was based off an email we rec'd from Dennis that summarized the DWSD/City proposal. We were not a part of the $12mm calculation that is in the 'public' realm now. I believe that was a result of a meeting DEQ/Dan had with the City earlier this week.
John indicated yesterday he would recommend/prefer to err on the side of caution for the amount requested from the legislature. Plus, keep in mind whatever number you choose assumes completion of KWA in June. If the project slips a month (& it very well could given it is a major capital project) the cost of the reconnect is going to go up a $1mm+ per month.
If it is possible I would recommend using the $13.2mm (hoping the project will be done as scheduled) given the county is in the best position to make that estimate. We don't have any info that would contradict that number.

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 08, 2015 1:13 PM
To: Duncan, Nancy (DTMB) <duncann1@michigan.gov>
Cc: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Wyant, Dan (DEQ) <WyantD@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Roberts, John (DTMB) <RobertsJ9@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Subject: Re: letter from John O'Brien

I would say we need to add the $1.2 difference from somewhere. I suggest we hold on to the idea of the bottle deposit escrow as we can easily take $1m droit if need t.

Sent from my iPhone

On Oct 8, 2015, at 10:39 AM, Duncan, Nancy (DTMB) <duncann1@michigan.gov> wrote:

> We're still carrying $12m as the cost to reconnect, and that's the number the Governor is using too. John would like your assessment of the need given the information in this letter. We plan to send a supplemental request to the Legislature for our $6m share this afternoon.
>
> ---
>
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> **Sent:** Wednesday, October 07, 2015 2:43 PM
> **To:** Wyant, Dan (DEQ); Sygo, Jim (DEQ); Muchmore, Dennis (GOV); Roberts, John (DTMB); Baird, Richard (GOV); Lyon, Nick (DHHS); Hollins, Harvey (GOV)
> **Cc:** Workman, Wayne (TREASURY); Khouri, Nick (TREASURY); Duncan, Nancy (DTMB)

Subject: FW: letter from John O'Brien
Importance: High

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They included their contract with the City. Sec 5.7 references prevailing rates the City would be charged; that is different than the rates reflected in the $13.2mm. So that contract may need to be modified.

They also raise some other items (under *Procedure to Activate Supply* -- p.3) that may have cost implications.

From: Baird, Richard (GOV)
Sent: Thursday, October 08, 2015 4:18 PM
To: Saxton, Thomas (Treasury); Muchmore, Dennis (GOV); Duncan, Nancy (DTMB)
Cc: Workman, Wayne (TREASURY); Khouri, Nick (TREASURY); Wyant, Dan (DEQ); Roberts, John (DTMB); Hollins, Harvey (GOV)
Subject: RE: letter from John O'Brien

I know you've had enough email traffic on this, but for what it's worth, Daddow thinks the number will be lower as a result of GM removing themselves from the system.

From: Saxton, Thomas (Treasury)
Sent: Thursday, October 08, 2015 1:17 PM
To: Muchmore, Dennis (GOV); Duncan, Nancy (DTMB)
Cc: Workman, Wayne (TREASURY); Khouri, Nick (TREASURY); Wyant, Dan (DEQ); Baird, Richard (GOV); Roberts, John (DTMB); Hollins, Harvey (GOV)
Subject: RE: letter from John O'Brien

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To: Duncan, Nancy (DTMB) <duncann1@michigan.gov>
Cc: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Wyant, Dan (DEQ) <WyantD@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Roberts, John (DTMB) <RobertsJ9@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>
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Sent: Wednesday, October 07, 2015 2:43 PM
To: Wyant, Dan (DEQ); Sygo, Jim (DEQ); Muchmore, Dennis (GOV); Roberts, John (DTMB); Baird, Richard (GOV); Lyon, Nick (DHHS); Hollins, Harvey (GOV)
Cc: Workman, Wayne (TREASURY); Khouri, Nick (TREASURY); Duncan, Nancy (DTMB)
Subject: FW: letter from John O'Brien
Importance: High

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They also raise some other items (under *Procedure to Activate Supply* – p.3) that may have cost implications.

From: Lyon, Nick (DHHS)
Sent: Tuesday, October 13, 2015 9:41 AM
To: Muchmore, Dennis (GOV); Wyant, Dan (DEQ); Khouri, Nick (TREASURY)
Subject: RE: What's the latest on Flint?

Dan has put together an action plan from the DEQ perspective. We have provided contact names for the items on his list that need to be joint DEQ/DHHS. We are potentially adding items to that list but need to work through our plan as we will have to work with local providers, the hospital, health plans, etc. We are doing that today. We are looking at testing, home lead investigations, but NOT remediation. That would still be the responsibility of the homeowner. I would expect that will be the next demand.

I've heard some grumbling around the supplemental. Some members feel it should be a loan, others worry that we are setting a precedent that the state will be asked to pay for similar upgrades in the future. We'll know more quickly on how they are going to react.

Jarrod has scheduled a phone call for tomorrow.

That's what I know.

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 8:40 AM
To: Wyant, Dan (DEQ) <WyantD@michigan.gov>; Lyon, Nick (DHHS) <LyonN2@michigan.gov>; Khouri, Nick (TREASURY) <KhouriN@michigan.gov>
Subject: What's the latest on Flint?

From: Saxton, Thomas (Treasury)
Sent: Tuesday, October 13, 2015 9:47 AM
To: Workman, Wayne (TREASURY); Muchmore, Dennis (GOV)
Subject: RE: Flint
Attachments: Flint Water Quality Report Veolia March 15.pdf

Attached is the report. The report is fairly short & quickly identifies actions that should be taken.

-----Original Message-----
From: Workman, Wayne (TREASURY)
Sent: Tuesday, October 13, 2015 9:38 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Cc: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>
Subject: Re: Flint

Checking on it now

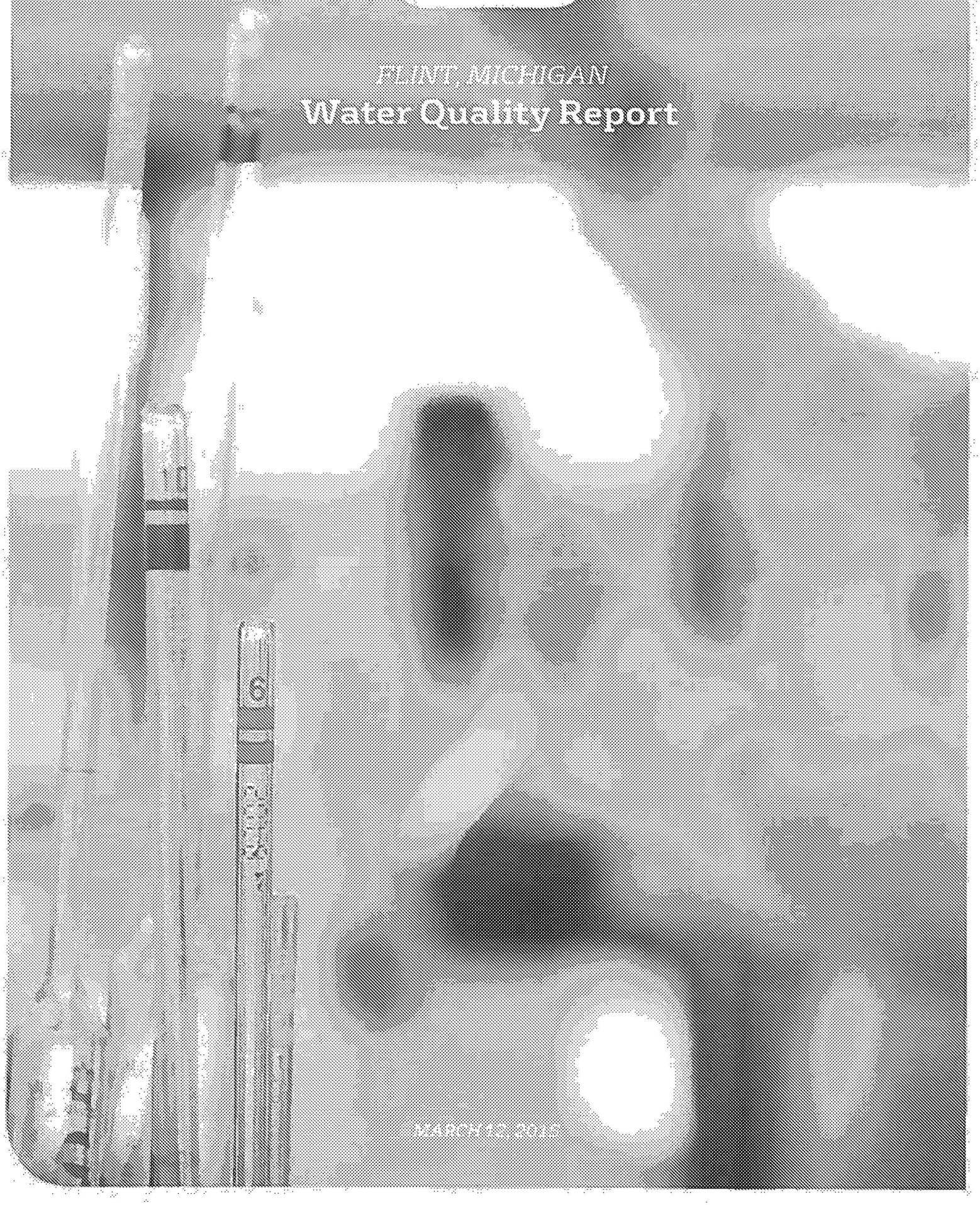
Sent from my iPhone

> On Oct 13, 2015, at 9:07 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>
> A lot of complaints about Natasha these days. Of course, I have a lot of complaints about myself and this Flint thing. If I had acted more quickly on some of my minister's complaints we at least would have had a more robust discussion. Do we have a copy of the Veolia conclusions somewhere?

VEOLIA

FLINT, MICHIGAN

Water Quality Report



MARCH 31, 2015

Water quality report 1
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> Review of actions taken to date 2
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> Veolia's recommendations 4
> Conclusions and next steps 9
> Results expected 11

Water Quality Report
March 12, 2015

FROM
Veolia North America

TO
Emergency Manager Gerald Ambrose

Executive Summary

The City of Flint changed water sources, transitioning from Detroit's system to the Flint River. This change created water treatment challenges that have resulted in water quality violations. Aging cast-iron pipe has compounded the situation, leading to aesthetic issues including taste, odor and discoloration. Public interest and scrutiny of the drinking water system intensified following the distribution of required public notices of violation.

The City of Flint has made a number of good decisions regarding treatment changes that have improved water quality. However, this is a very complex water quality issue and the City is seeking additional advice on what to do to ensure healthful drinking water for the community.

Veolia appreciates the City's decision to seek independent third parties to review current treatment processes, maintenance procedures and actions taken to date, and provide ideas for improvement. We are pleased to present this final report to the City of Flint following our experts' 160-hour assessment of the water treatment plant, distribution system, customer service and communications programs, and capital plans and annual budget.

This report provides recommendations and a roadmap for improvement, though our engagement was limited in scope. Our assessment included reviewing actions taken by the City to date, validating the City's plans going forward, and making recommendations for ideas not being considered.

Although a review of water quality records for the time period under our study indicates compliance with State and Federal water quality regulations, Veolia, as an operator and manager of comparable utilities, recommends a variety of actions to address improvements in water quality and related aesthetics including: operational changes and improvements; changes in water treatment processes, procedures and chemical dosing; adjustments in how current technologies are being used; increased maintenance and capital program activities; increased training; and, an enhanced customer communications program.

We are also providing a recommended schedule and estimated costs for implementing changes. It is our desire to help Flint residents and public officials better understand the current situation so that informed decisions can be made to ensure safe drinking water for the city's customers.

Review of Actions Taken to Date

To address water quality issues, the city has made operational changes, sought help from the State, hired engineering firm Lockwood, Andrews & Newnam, Inc. (LAN) to provide additional advice, and hired Veolia for an assessment from a utility operator's perspective. The City has also reached out to different specialty vendors (chemical suppliers, filter companies and tank aeration companies) for information about products to help with the TTHM issues. These are logical steps to take.

Flint is not alone in dealing with TTHM problems, as many utilities across the country are facing this challenge. The City appears to be following standard steps that many of those communities are taking to successfully correct the problem.

Although the primary focus of this review was based on solving the TTHM problem, the public has also expressed its frustration over discolored and hard water. Those aesthetic issues have understandably increased the level of concern about the safety of the water.

The review of the water quality records during the time of Veolia's study shows the water to be in compliance with State and Federal regulations, and, based on those standards, the water is considered to meet drinking water requirements.

The City has been proactive in its efforts to reach out to the medical community, to set up a phone number and email address to receive complaints, to post State Water Quality reports, to provide the list of EPA required water tests, and offer to test the water at customers' homes.

From our review, these numerous efforts demonstrate how the city is trying to be transparent and responsive beyond what many other communities might do in similar circumstances.

State Report

The Michigan Department of Environmental Quality (MDEQ) has requested specific actions be taken related to the total trihalomethane (TTHM) issues. The February 2015 report from LAN (*Operational Evaluation Report TTHM Formation Concern*) indicated apparent reasons for the elevated levels of TTHM in the distribution system. These generally relate to high Total Organic Carbon (TOC) in the water source, improperly operating equipment both in the plant and the distribution system, less-than-optimal plant TOC removal and old cast-iron pipe in the distribution system. **Our assessment confirms that these reasons are likely given our on-site laboratory testing and analysis, as well as our first-hand observations.**

Due to time constraints, LAN's report to the State was submitted prior to Veolia's final analysis and recommendations, and contained a number of key initial and contingent steps the City should consider, including:

Initial Actions

- Hire a Third Party Water Quality Expert to Complete Independent Audit
- Obtain a THM Analyzer
- Carry Out Jar Testing
- Water Plant Optimization Softening
- Water Plant Optimization Disinfection of Filter Beds (Pre-Chlorination)
- Water Plant Optimization Polymer Aid to Coagulation and Flocculation
- Increase Water Main Flushing
- Water Modeling Cedar Street Pump Recirculation
- Water Modeling West Side Pump Recirculation
- Broken Valve Locations
- Increase Flushing

Contingent Actions

- Fix Ozone System
- Start Feeding Coagulant and Flocculation Polymer
- Convert to Lime and Soda Ash Softening
- Change Disinfection to Chloramine or Chlorine Dioxide Temporarily
- Install Pre-Oxidant at Intake
- Replace Filter Media Implement Advanced Treatment
- Increase Main Flushing
- Continue Valve Replacement
- Emphasize Cast Iron Pipe Replacement

Veolia's Recommendations

While many of Veolia's recommendations match the initial assessment provided by LAN, our approach, as an operator and manager of comparable utilities, considers a more comprehensive solution. These improvements include operational changes, differences in water treatment regimes and chemical dosing, increased maintenance, and increased training.

- **Addition of Permanganate** – The addition of a permanganate chemical will help reduce ozone demand as well as chlorine demand. The reduction of ozone is needed to help eliminate the possibility of violating the bromate limit. The addition of the chemical will require state approval, submission of design documents for approval, procurement of the equipment and installation. The State has indicated they will work with the City on expediting review and approval of any requested changes. The required dosage of permanganate is estimated to range from 0.5 mg/L to 1.2 mg/L with a corresponding price of $160,000 to $320,000 per year. (Please note – The water in the river is dynamic which means it will change with weather, seasons and other factors. The estimates provided are based on bench testing at a given time and as such require the operators to test water and to verify chemical dosages on a frequent basis.)
- **Reduction of Ozone Feed** – Treating water is a delicate balance - increasing ozone to fix the TTHM problem can raise bromate levels to a point of violation. The introduction of permanganate is being recommended to reduce the demand for ozone so that feed rates will not exceed 5 mg/L. The current ozone dosing has been as high as 8 mg/L and, as such, if allowed to continue, will increase the risk of violating the bromate levels.
- **Increase of Ferric Chloride** – Four coagulants were tested by Veolia -ferric chloride, ferric sulfate, polyaluminum chloride (PACl) and aluminum chlorohydrate (ACH). Ferric chloride and ACH were found to be the best choice of product for effectiveness in removing TOC, a precursor to TTHM formation. Current ferric chloride dosages are too low and dosages of 100 mg/L or more are recommended. Again, please note, that the amount of chemical needed changes with the nature of the river and as such, water must be tested multiple times a day with corresponding changes in chemical dosages. This increase to 100 mg/L is twice what is currently being fed and much higher than what had previously been fed last year. The increase in chemical costs could be up to $1,000,000 per year. This change in dosage (using ferric chloride) can be made immediately without state permit review.
- **Reduction of Lime** – Lime is currently being overfed. A higher dosage of lime does not necessarily mean better treatment. A review of different dosages with jar testing indicates that the current dosage of 280 mg/L can be reduced to 230 mg/L. This represents a potential range of savings of up to $270,000 per year. This change can be made immediately. It should be noted that the current softening equipment is in poor condition, which does complicate the treatment process with a poor balance of flow between the two basins, weirs that are not level causing bypassing with the softener basins, and simply old mechanical equipment that periodically breaks down. This equipment is not going to be needed when a change to lake water occurs. Addition of soda ash to help further reduce hardness in cold weather might require dosages up to 40 mg/L with an annual chemical cost up to $320,000. There have also been some questions or complaints from the public regarding hard water. The water entering the plant is currently 360 mg/L and the plant is reducing that level of hardness to about 210 mg/L. Optimization of the dosage can reduce the hardness

further to about 180 mg/L. This reduction however has been sporadic as equipment breakdowns and high flows have caused problems keeping the softening process on-line. As we have noted before, the dosage needs to be adjusted daily or more often based on process control monitoring. The raw water hardness in the summer is much less than in the winter. For illustration purposes, the difference could be 360 mg/L in raw water in winter compared with 220 mg/Lin the summer.

- **Eliminate Pre-Chlorination on the Filters** – The reduction of pre-chlorination on the filters during the summer months can help reduce TTHM formation. This action has to be considered carefully with procedures documented and reviewed for engineering principles. As such, it will take time for the design engineer to determine what could be done to assure the proper chlorine contact time and document that other safety protocols in water are met. This requires state approval. Any submission should be considered along with a possible change in filter media. If Granulated Activated Carbon (GAC) is installed then the pre-chlorination would be stopped or drastically reduced because of the chlorine impact on the GAC filter media. Veolia's initial investigation into changes in chlorine feed point indicate that the recommended action can be accomplished while maintaining the required regulatory contact time for disinfection.
- **Change Filters to Granulated Activated Carbon (GAC)** – The object of the other changes being made is to reduce the TOC before chlorine is added into the process. The plant by design is limited on the amount of TOC removal possible. A maximum removal of only 60% is likely if the plant is properly optimized. The change of filter media to GAC would provide the best reduction possible and provide better than 90% removal dramatically reducing the potential for TTHM formation and thus ensuring compliance with that parameter for the water system. The change in filter media; however, is complicated requiring approval by the state, design of the changes, procurement of the media and a contractor to install it. That will take time and is likely in a range of $1.5 million (more or less) in cost. The use of GAC also requires more testing and monitoring of the media and the TOC than with the current media. GAC will accumulate TOC and begin to become in effective after a period of time. Depending upon the level of TOC reaching the filters this could be as short as 3 months and as long as 9 months. The amount of TOC is dependent upon the river water quality and operation of the other plant processes. Once the ability of the filters to remove TOC is diminished, the GAC media has to be replaced if river water continues as a source. The change to lake water will not require TOC removal and the media could continue to be used as filter media for that new water source.
- **Corrosion Control** – The primary focus of this study was to assure compliance with the TTHM limits. That is not the only problem facing the city and its customers though. Many people are frustrated and naturally concerned by the discoloration of the water with what primarily appears to be iron from the old unlined cast iron pipes. The water system could add a polyphosphate to the water as a way to minimize the amount of discolored water. Polyphosphate addition will not make discolored water issues go away. The system has been experiencing a tremendous number of water line breaks the last two winters. Just last week there were more than 14 in one day. Any break, work on broken valves or hydrant flushing will change the flow of water and potentially cause temporary discoloration.
- **Eliminate a Storage Tank** - The water system has more storage than it requires, due to excess capacity in the water lines in combination with the storage tanks. The City has already employed LAN to update the hydraulic model. The hydraulic model should be used to help determine if water levels can be lowered further and even to remove some storage tanks from service. That decision may need to be made

seasonally. For example demand during water main breaks last week required extensive amounts of water. The excess storage is more a problem with TTHM formation for the system in summer than winter.

- **Prioritize Valve Replacement** - The hydraulic model shows long water age in portions of the system that appear to be contributing to the TTHM problems. LAN has updated the model to include the location of broken valves and that added information is being used to identify other system problems. The City has a contract for valve turning and repair work that should be focused on known broken valves, particularly in sections of the distribution system with old water age. This activity however must wait until warmer weather in fear of causing problems in the water system with lines freezing.
- **Target and Increase Flushing** – Flushing the fire hydrants can be useful in cleaning out lines to minimize discolored water complaints and also helping reduce the age of water. This DOES NOT mean just opening hydrants. The hydraulic model needs to be used to determine which hydrants should be opened and for how long to ensure the lines are properly cleaned. For example, this might require 15 minutes or even several hours of flushing depending on location. The flushing of hydrants also needs to include records of hydrant condition, color of water initially and after periodic increments plus chlorine residual testing. All of that information will help provide information to the engineers on the effectiveness of the procedure. Each crew doing the work should be trained to help explain the process to the public and also warn neighborhoods about flushing so that staining of laundry can be avoided.
- **Change to Lake Water** – The changes being made now to the water plant will not be the same changes required to treat lake water once it becomes available. A thorough analysis and plan needs to be made in preparation of that switch. This is going to need to include changes in how the plant is operated, like eliminating lime softening and reducing the dosages of many chemicals. Consideration will also have to be given to algae treatment when lake water is being used.
- **Operating Programs** – All of the changes discussed above are based on testing and techniques proposed by engineers and skilled operators of both LAN and Veolia. The staff will need further training and implementation of detailed protocols to successfully implement the changes and to ensure long-term success at the plant. This means the City needs to implement a series of programs to ensure success in these changes.
    - **Process Control Management Plan** (PCMP) – The amount of testing and resulting changes in chemical dosages, along with monitoring the impact on the water, will require a well-documented process that all operators follow. An example of this is jar testing, which is used by the operators to identify the most effective chemicals and dosages to optimize treatment. The staff understands the basic treatment process but needs further practice and training to become proficient in the use of routine process control to adjust for water quality. This is commonly referred to as a PCMP and is used as a standard operating procedure so that the operators on the day shift can communicate with the night shift, that operators are following the same treatment plan for water, that the adjustments are unified between different shifts and different people, that a desired water treatment quality is defined and variations from it signal alarms and that the staff knows what to do when the water quality setpoints begin to drift away from its desired quality levels.
    - **Lab QA/QC** – The operation of the water plant is dependent upon accurate lab results. Standard operating procedure needs to be set and lab technicians trained in that process. EPA and the State

set procedures and standards to be met and the staff should strive to meet those standards. The City has already purchased a TTHM analyzer but should also consider a TOC analyzer that can be an online continuous device to provide immediate information on influent and effluent levels of TOC. Part of the lab records should be historical review of data to help operators better understand the changes they make in the plant.

- **Maintenance Management** – The key to water equipment is having all the equipment effectively maintained and functioning properly. The current capital program is fixing many broken pieces of equipment and updating the plant to current standards. This however must be followed with a rigorous maintenance program that ensures the proper preventive maintenance, is able to predict when maintenance is needed to keep equipment functioning properly and responsive to changes in flows and source water quality.
- **Training** – The changes being suggested are new to the staff and as such training needs to be provided in what the changes involve, why they are being made, the impact on the water quality, and how best to run the plant. A good demonstration of skill level is for the staff to become certified by the State as a licensed water plant operator. Many utilities now require all operators to hold at least the minimum certification level as a starting point and offer incentives to increase their certification level.

- **Communication Program** – The city should lay out an immediate, written strategy for communicating with the public in the short-term, as well as a 6-to-12 month strategy that contemplates known, future events like the KWA pipeline and switch to lake water. A wide range of activities are underway to work with the public but a comprehensive and coordinated effort, with a strategic focus, will help the utility and its customers.
  - **Dedicated Communications Personnel** – The City has a single, dedicated public information officer, tasked with providing service to all of city government. The current focus on communications support for Public Works, and the anticipated needs over the next several years, indicate the city would benefit from the hiring of a staff person in Public Works who could establish a communications program designed to provide clear and concise information to a broad audience though a number of different channels. In the interim, the city could hire a communications intern, local communications firm, or somebody with experience who is able to provide reduced or no-cost services for the immediate future.
  - **Communications Planning – Public Notification** – The City should be congratulated on its efforts to keep the public informed. It is posting its monthly reports on the web page to provide transparency, though these reports are highly technical – and may be too technical for the customer base at large. They are valuable to those customers who do want this level of detail. The city should create a single-page dashboard of information that outlines the water utility's performance for the previous month, post the dashboard on the website, print copies for distribution at customer service or other reception areas, and be provided during speaking engagements or other events. This dashboard should be easy to understand, and include:
    - The number of water quality tests conducted the previous month
    - The number of violations reported

- Whether these results are in or out of compliance
- Information about other proactive measures such as main and hydrant replacements, or other programs to improve performance of the water utility
- Benchmarking information so the reader has a greater understanding of how Flint compares with other similar utilities in the region and across the country

- **Public Meetings** –There should be additional, proactive coordination with neighborhood, community and civic groups to provide speakers on timely topics. Given the list of numerous responsibilities, the Public Works director cannot do it alone – the city should identify three or four other staff members, knowledgeable about the water utility who can also speak to various groups, provide information and answer questions. The development of an outreach strategy to target key neighborhood, community and civic groups also will advance the communications effort and the dissemination of information in both the short and long term.
- **Standard tools** – Work crews in the field are often the faces of the utility – the city should create standardized tools for communicating with the public that can be easily and quickly delivered to the community in the event of main breaks, flushing or pre-planned capital improvements. Tools should include:
  - Door hangers for individual distribution
  - Yard signs with simple messaging to be placed near work-sites
  - A simple tri-fold brochure with useful information about the utility and appropriate contact information
  - Specific flyers about a range of topics
  - Infographics about how the water system works, from the intake to the customer's site
- **Change in Billing Format** – The City currently has no real way to reach all customers on a regular basis and provide information. The city should consider changing from a billing postcard to using an envelope and bill stuffer. Monthly or bi-monthly bill inserts are typically used to provide educational material for customers and are standard ways to provide information. Understandably, budget considerations must be taken into account.
- **Use Public Affairs Programming and Opportunities** – The news media has been covering this topic quite extensively – there are other media-related opportunities that may reach a wider audience. Taking advantage of these opportunities will help the city relay information to its customers and the community.
  - Participate in regular editorial-board meetings to provide background information and updates on key milestones or events.
  - Identify a local weekly television program and offer to provide guests to speak about key milestones or upcoming events.

Conclusions and Next Steps

The focus of this report is to help assure TTHM compliance and then improve general water quality. The City had good results in its most recent TTHM tests, although that is to be expected with the changes made to date and the cooler weather which contributes to low TTHM formation. Warm weather will be a different situation both in the nature of the Flint River water quality and in the formation of TTHM. With those changes coming, the City needs to act quickly to make improvements before additional testing takes place this spring and summer. The summary below provides the recommended actions, a priority for their implementation and projected costs either operational or capital. The costs are rough orders of magnitude and will vary with changes in water quality, operational decisions, and engineering choices being made and in some cases require State approval. Although a priority is assigned many of these actions can take place simultaneously.

Priority	Action	Annual Operational Cost	One Time Capital Cost
1	Implement operating programs for process control, lab QA/QC, maintenance, and training. These programs are needed regardless of the TTHM issue and will help with transition to lake water. The City has decided upon a central maintenance software and the water system should be the first to utilize this program since costs are already budgeted. These programs should be initiated immediately.	$ 25,000	$ 250,000 - $ 350,000
2	Contract with your engineer and initiate discussions with the State on the reduction of chlorine prior to the filters and changing the filter media to GAC. This activity has the longest time frame for design and approval, but also is extremely critical to assuring reduced TTHM production. The current filter cleaning and maintenance project needs to be adjusted to take into consideration the change in filter media both to dispose of the anthracite instead of cleaning and to install the GAC. This entire project needs to be done by early July to assure a flow of water throughout the system. Several months are required for the engineering design, State approval, bidding of work and installation of GAC and as such needs to begin now.	$ 0	$1,500,000
	Contract with your engineer and initiate discussions with the State on the addition of 0.5 to 1.2 mg/L of either potassium permanganate (dry) or sodium permanganate (liquid). This will take time to get approved and to implement. The use of liquid tanks at the raw water pump station may be the quickest and least expensive alternative for a temporary measure.	$ 160,000 - $ 320,000	$ 50,000

	Contract with your engineer and initiate discussions with the State on the addition of a corrosion control chemical. This action can be submitted and discussed with the state at the same time as the other chemical and filter changes saving time and effort. A target dosage of 0.5 mg/L phosphate is suggested for improved corrosion control.	$ 50,000	$ 50,000
3	Increase the ferric chloride dosage to 100 mg/L depending on river water TOC levels. (Lower TOC levels can be treated with less ferric chloride.) This change can be made now and is allowed by the State.	$ 1,000,000	$ 0
	Reduce the ozone feed rate to 5 mg/. This change can be done now and does not require State approval.	($50,000 – $100,000	$ 0
	Reduce the lime dosage to minimize hardness levels after softening. This will eliminate magnesium removal during treatment, but will also reduce total hardness. A reduction in carbon dioxide dosing for recarbonation treatment also is expected due to the reduction in lime feed. This change can be made now and does not require State approval.	($270,000)	$ 0
4	Confirm with the engineer when the revised hydraulic model will be completed and if necessary for time to focus on areas of longest water age if that would speed up the effort. Identify impact of reducing tank levels or eliminating a tank seasonally to improve water age. Include with this effort a list of hydrants to flush along with time required to assure drawing fresh water through the system. The engineer has been assigned this task already and confirmation of the timing of a delivery is needed.	$ 0	Already Contracted
	Ask the engineer to identify closed valves on a map that are impacting water age and that can be bid for replacement as soon as weather permits. Have the engineer identify areas of the system where the valve contractor should be focused on finding and fixing closed valves.	$ 0	Already Budgeted
5	Implement the recommendations in the communications program including a person assigned to public works education, using envelopes instead of cards along with bill stuffers for education and provide training for staff. Envelopes and bill stuffers are expensive and might be done periodically and not every month. The cost of TTHM notices, Annual Water Quality Reports and City notices should be figured into if any additional costs would exist. Many of these changes are underway now by the City.	Position Being Budgeted	

Notes

- The costs provided are rough order of magnitude which final engineering will firm up but will fluctuate with final decisions on engineering, operating technique and water quality.
- The change from river to lake water will dramatically cut the chemical costs as less is needed once the change occurs. This means that potassium permanganate will likely not be needed, ferric will drop as much as it went up, ozone levels will be lower and little lime will be needed.

Results Expected

The real question is what changes can be expected from these results in lowering the TTHM, improving the aesthetics and preparing for the change to lake water.

- **TTHM** – The City has already made great strides in reducing the TTHM levels with the changes already made. The additional suggestions by Veolia will further reduce TTHM in the water and help get the city released from the notices being provided to customers.
- **Hardness** – The hardness entering the plant this winter is 360 mg/L with the current system reducing it to 210 mg/L and optimization will reduce to about 180 mg/L. During the summer the levels will be lower probably in the 140 mg/L to 150 mg/L range. The target set by the current best operating practices is 120 mg/L to 150 mg/L.
- **Discolored Water** – The discolored water is caused by the old unlined cast iron pipe. The water from the plant can have an impact on discolored water, but a greater concern is the breaks and construction work that disrupt the flow of water causing discoloration. A polyphosphate is suggested to help bind the old cast iron pipe reducing instances of discolored water. This along with improve flow of water and programmed hydrant flushing will help, BUT WILL NOT eliminate discolored water occurrences.
- **Change to Lake Water** – The recommendations include the suggestion of programs to help the staff better manage the treatment process, additional testing to adjust the plant and additional lab monitoring, a maintenance program focused on keeping equipment properly functioning and more training for staff to improve their skill level. Those actions will prepare the staff for the change of water sources when it comes next year in addition to developing a thorough plan for the switch.

Resourcing the world

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From: Workman, Wayne (TREASURY)
Sent: Tuesday, October 13, 2015 10:02 AM
To: Muchmore, Dennis (GOV); Saxton, Thomas (Treasury)
Subject: FW: flint documents
Attachments: Flint public works.pdf; Flint water quality.pdf

Here is the Interim report from February also

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

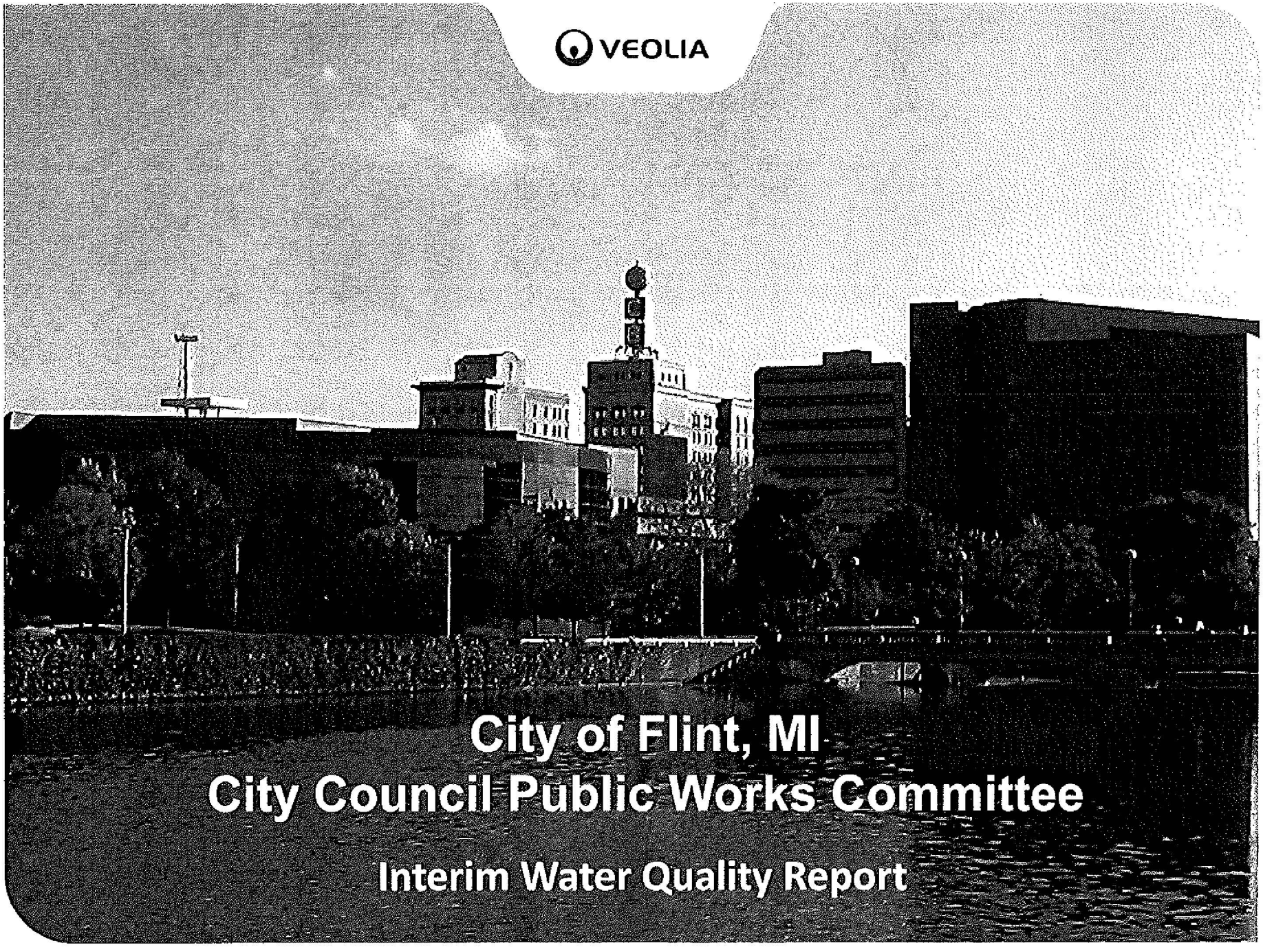
From: Dempkowski, Angela (Treasury)
Sent: Tuesday, October 13, 2015 9:49 AM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Subject: flint documents

Randy asked me to get these to you to give to Dennis Muchmore.

Angela Dempkowski
Senior Executive Management Assistant
Department of Treasury

From: Ducat, Penny (Treasury)
Sent: Tuesday, October 13, 2015 9:43 AM
To: Dempkowski, Angela (Treasury) <DempkowskiA@michigan.gov>
Subject: scan

Penny L Ducat
Bureau of Local Government
430 W. Allegan
Lansing, MI 48922
Email: ducatp@michigan.gov
[redacted]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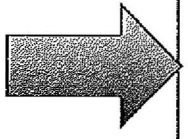
City of Flint, MI
City Council Public Works Committee
Interim Water Quality Report

Veolia Scope of Work

Week 1

- Provide a review of current actions
- Engage staff, visit facilities and analyze data
- Make interim report



Week 2

- Carry out more detailed study of initial findings
- Make recommendations for Improving water quality
- Provide a plan, cost and schedule for change

Items of Note

- **Not in scope** – studying why the change from DWSD or the history of the utility
- **What we found** – A very frustrated community and a staff trying to solve the problem, having some success but frustrated with the pace of change

Everybody Is Checking the Safety of Water

- City, state, news media, universities and other groups
- Safe = compliance with state and federal standards and required testing
  - *Latest tests show water is in compliance with drinking water standards*
  - *Monthly report available on web page*
- More than 20,000 tests required annually for city
- Strict testing requirements in place (what and how to test)

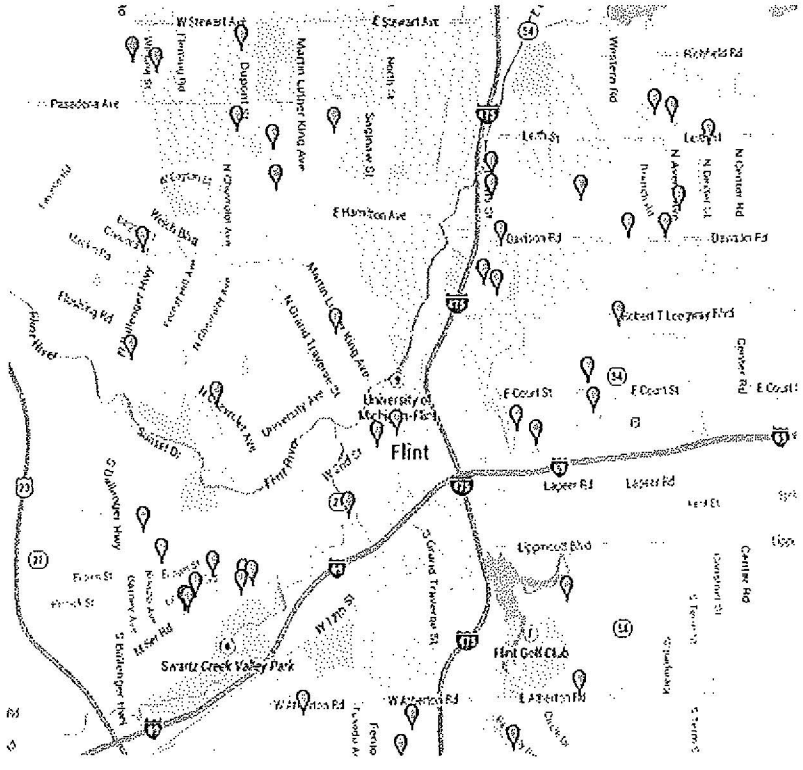
Why TTHM Notices?

- TTHM is formed as a result of the reaction between chlorine and organic material in the water
- City is required to test quarterly at 8 sites
  - *Last summer, several sites had more TTHM than allowed*
- City has reduced levels of TTHM and now all sites are in compliance
  - *Customer notification letters are required until tests are in compliance an average of four quarters*
- It will take at least 2 more quarters to lower average
  - *Even a change to DWSD water doesn't solve problem*
- Flint is not alone – hundreds of communities are facing TTHM issues

Why Discolored Water?

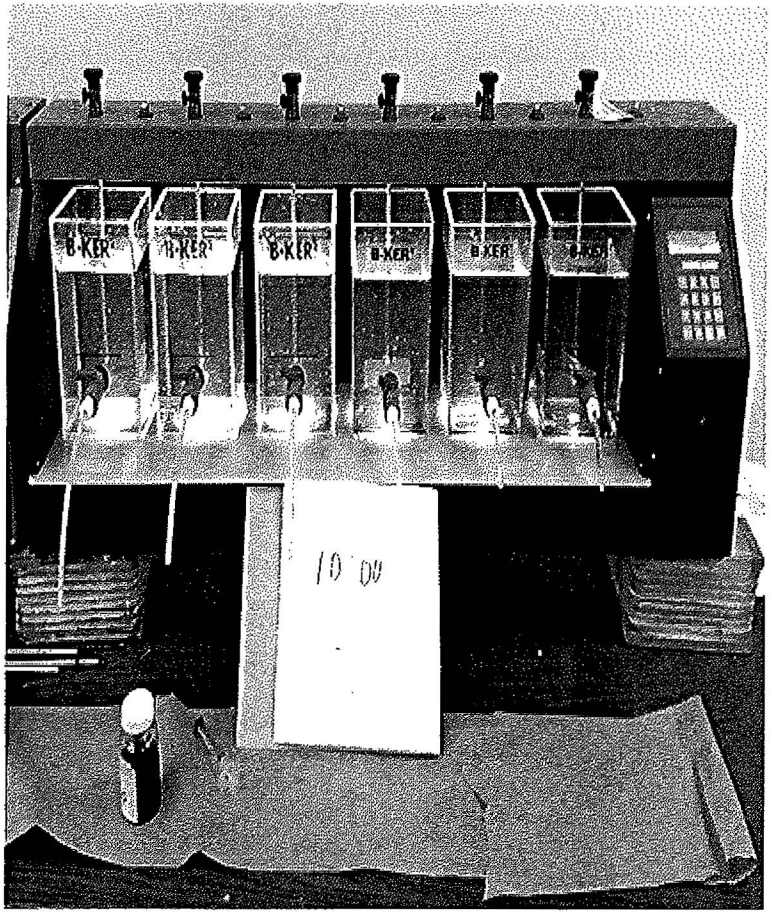
- Old cast iron pipes
- Always has been some discolored water problems – mostly after water breaks
- Efforts to reducing TTHM didn't help discoloration
  - *Doesn't mean the water is unsafe but it is not appealing and raises questions*
- City will test the water at your home – call 787-6537 or email flintwater@cityofflint.com
- Tracking customer complaints is important

Location of water quality complaints
The last 12 months – fewer than you think



Water Quality Can Be Improved

- Adjust the chemicals being fed – stop some, increase some and change some
- Provide better monitoring of water quality to help make adjustments
- Continue repair or replacement of broken parts
- Reduce the over capacity of the distribution system
- Do a better job explaining what is happening
- Do a better job of asking for help



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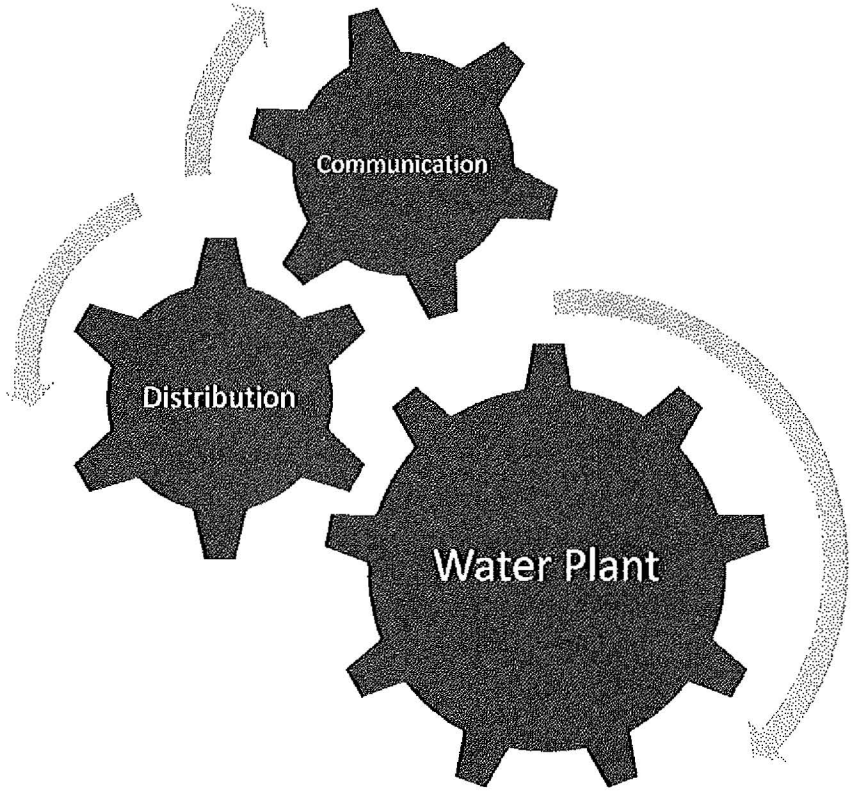
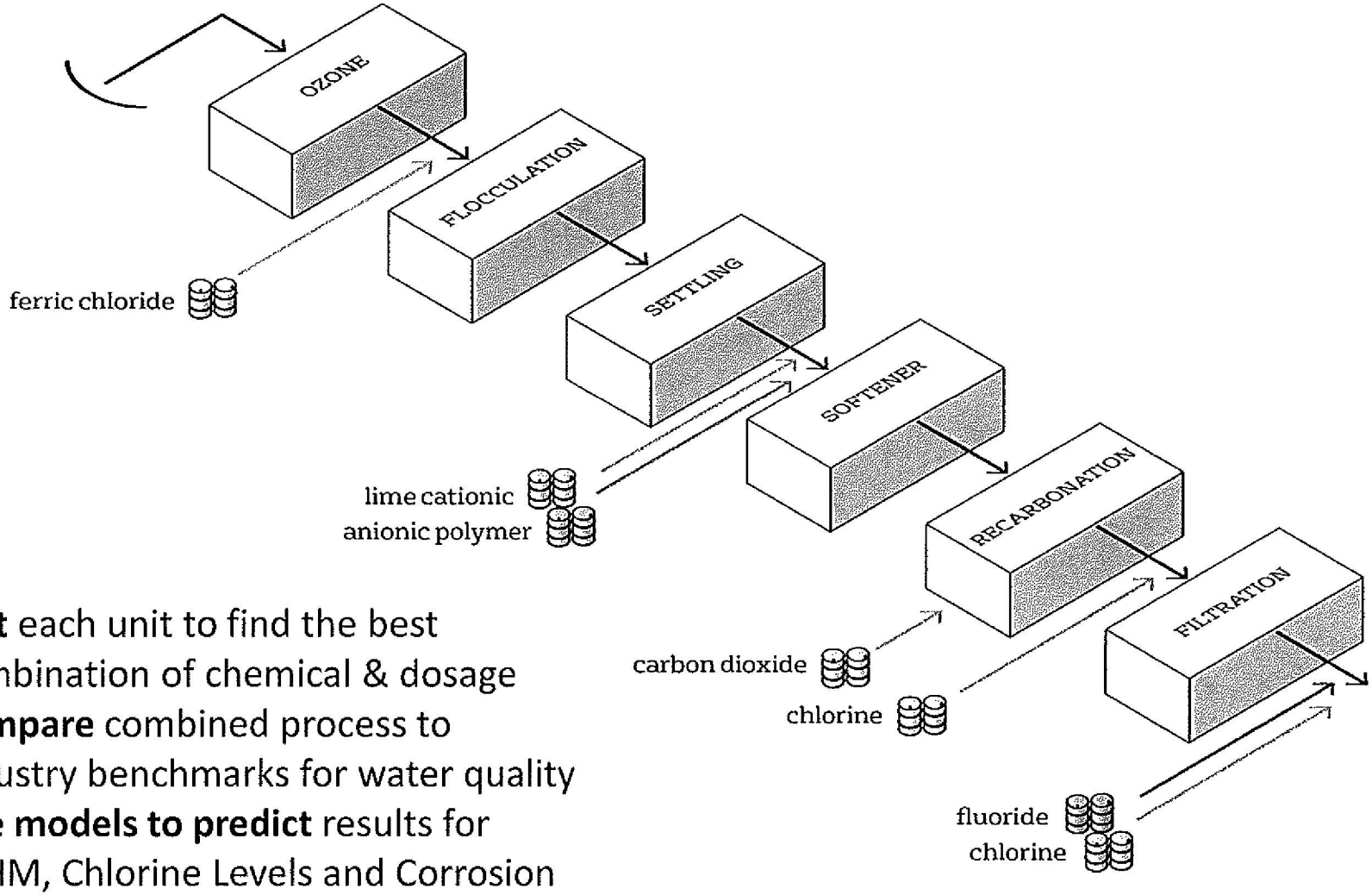
Further Explanation of Solutions

Solution Involves Coordination of 3 Activities



- Water plant improvements
  - *Optimize chemical dosages*
  - *Consider different chemicals*
  - *Change dosing points*
  - *Install granulated activated carbon*
  - *Complete plant upgrades*
  - *Implement best mgt practices*
- Distribution system improvements
  - *Fix broken valves*
  - *Ask for customer feedback*
  - *Reduce tank storage*
  - *Target line flushing*
  - *Run a hydraulic model*
- Better communication with customers
  - *Engage advisory committees*
  - *More accessible utility*
  - *Make it easy to access information*
  - *Better customer communication*

Optimize Plant Processes



- **Test** each unit to find the best combination of chemical & dosage
- **Compare** combined process to industry benchmarks for water quality
- **Use models to predict** results for TTHM, Chlorine Levels and Corrosion

Complete Plant Construction & Re Prioritize Capital

Cost effective plan in budget

- Complete water plant renovation
  - *Target SCADA and instrumentation in plant*
- Speed up valve turning contract & provide money for replacements
- Speed up hydraulic model update to reduce tank volume
- Evaluate installing of granulated activated carbon on filters

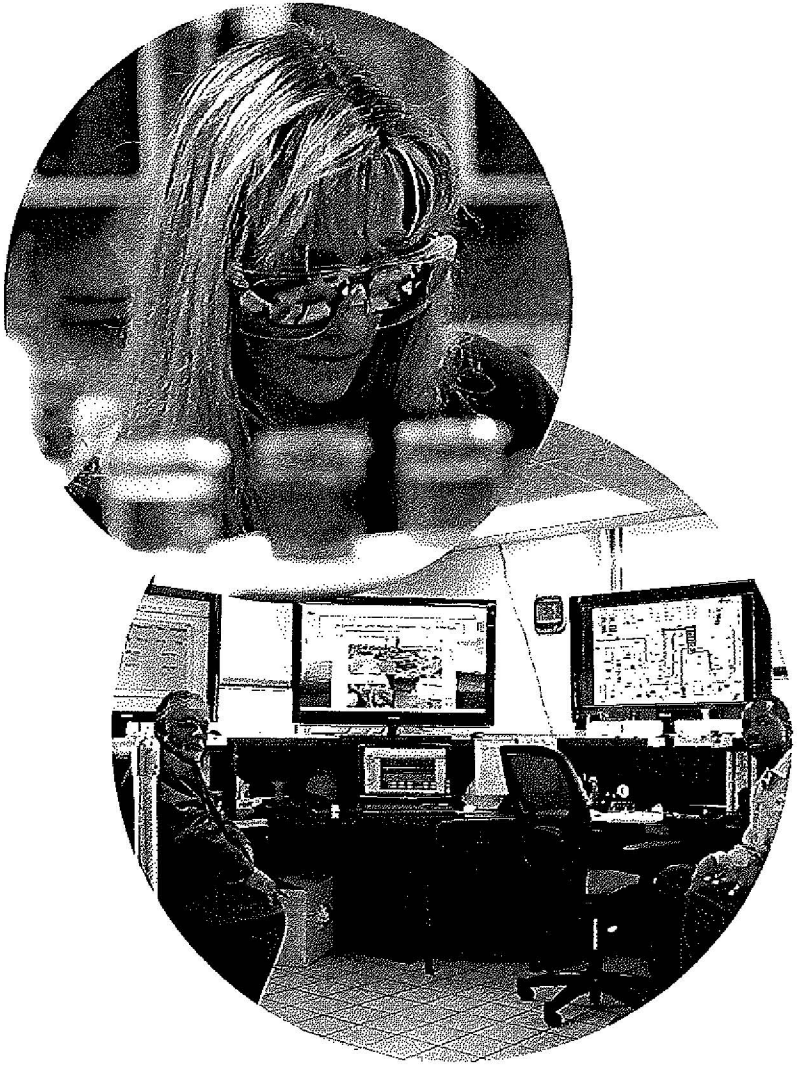
Weather can impact timing

Digging up a water valve for repair
Need good weather to start

Implement Best Management Practices

<u>Activities to Help Operators Maintain Good Water Quality</u>

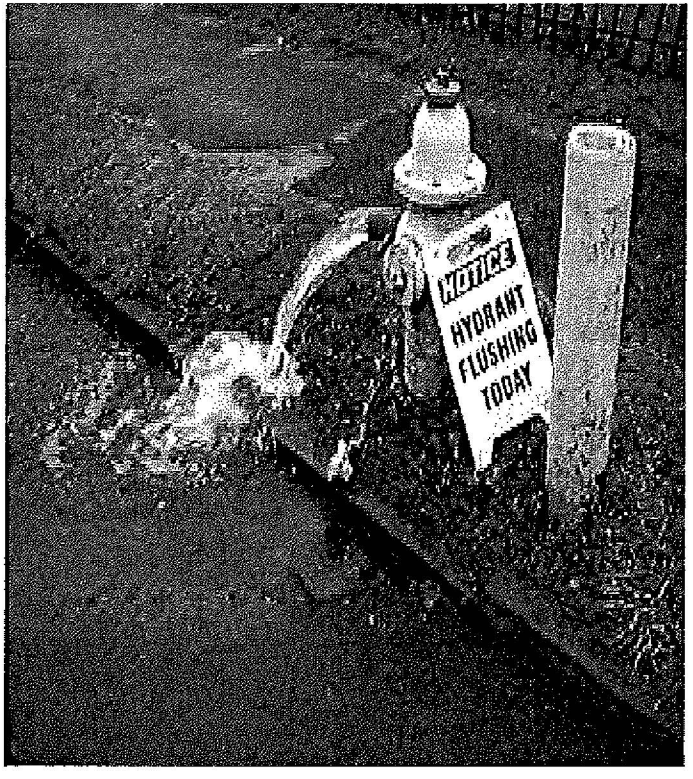
- Process Control Management Plan
- Lab QA/QC Program
- Computerized Maintenance Management System
- Asset Management System
- Training and Certification Program
- Vulnerability Plan



Distribution System Improvements

- Speed up flow of water from plant to homes – 2 weeks plant to house
  - *Find closed valves & open them*
  - *Replace broken valves*
  - *Update hydraulic model*
  - *Reduce system storage*
- Track customer complaints
  - *Test customer water*
  - *Spot flush hydrants to clean areas of stagnant water in the system*

Flushing out discolored water



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Improving Customer Service

Make It Easy to Access Information and People

Develop a proactive customer communication plan

- Create advisory committees to help direct efforts and improve flow of information
- Establish a single point of contact to manage all water quality complaints
- Provide additional customer service training to staff
- Expand neighborhood and community outreach
- Change monthly billing statements from card to envelope with information

Example - Communicate in the field

NOTICE: ANNUAL FLUSHING PROGRAM

We are conducting our annual flushing program to enhance your water quality and clean the distribution system.

DC Water crews will be flushing hydrants in your area 10:00 p.m. to 6:30 a.m. on the following dates:

9/24 through 9/30

IMPORTANT INFORMATION

- Your water supply will not be shut off during hydrant flushing.
- You may notice slight water discoloration or low water pressure.
- During this time, customers can continue normal water usage, including drinking, bathing and laundry (unless water is discolored).

If you experience discolored water during this period:

- Run your cold water taps for 15 minutes. If it does not clear up, please contact our Drinking Water Division.
- Do not run your hot water. If you experience discolored water from your hot water tap for several hours, then it is recommended to drain and flush your water heater tank.

Provide field crews with additional communications tools to use to address questions or concerns from the public

Create door hangers, flyers, or yard signs to notify neighborhoods about main breaks, hydrant flushing, or system maintenance that may affect the public

Create a business card or other contact card with the name and phone number of the single point of contact with the Department of Public Works who is managing information flow

****sample door hanger provided by DC Water & Sewer Authority***

Clear, concise information is key

- **Simplify the reports on the web page dedicated to addressing water system questions**
  - *Create a single-page, easy to understand report for the public*
  - *Use charts or provide other examples to demonstrate water quality testing and system or treatment plant improvements underway*
  - *Provide name, phone number and email address for identified point of contact so customers can request more information*
  - *Continue to provide Monthly Operation Report and Water Quality Report Summary for those customers interested in more technical information*
  - *Use site to provide additional notice of field work that may impact customers*

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What Is Next

Next Steps

Week 1

- Provide a review of current actions
- Engage staff, visit facilities and analyze data
- Make interim report

Week 2

- Carry out more detailed study of initial findings
- Make recommendations for Improving water quality
- Provide a plan, cost and schedule for change

Questions Being Heard

REMEMBER

We just started. Might not have an answer yet to your question

- **When will water improve -** The water has improved with current actions. More changes will occur over weeks and months because of safety reviews
- **Date of next update and final report** – An update will be provided next week and a report the following week.
- **Time frame for implementing recommendations –** The City is already started. Others a few days and some weeks or months due to State approval being required or weather.
- **Cost of changes** – Don't know yet but we are aware of the financial concerns

More Questions Being Heard

- **How are TTHM formed –** It's the reaction of chlorine to organics (leafs, dirt) in the water.
- **How to reduce TTHM –** Reduce organics before introducing chlorine and shorten time chlorine has to react with the organics
- **What causes discoloration –** Older lines, the iron parts of the system will leach iron into the water causing the discoloration. Other times its just air built up.
- **Why no discoloration with DWSD –** There was. Flint had a bad time with breaks of old line and is doing lots of construction. This stirred up the water and caused discoloration.

More Questions Being Heard

- **Can you test my water –** The city will test your water for free. But, only 2 of 20 people have taken the city up on the offer since it began offering the service.
- **Medical problems –** Some people may be sensitive to any water. Talk to your doctor. The City is communicating with the medical community.
- **Confidence that future problems will be avoided** – Recommendations will include putting programs in place to better respond to water changes and assure quality

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Questions?

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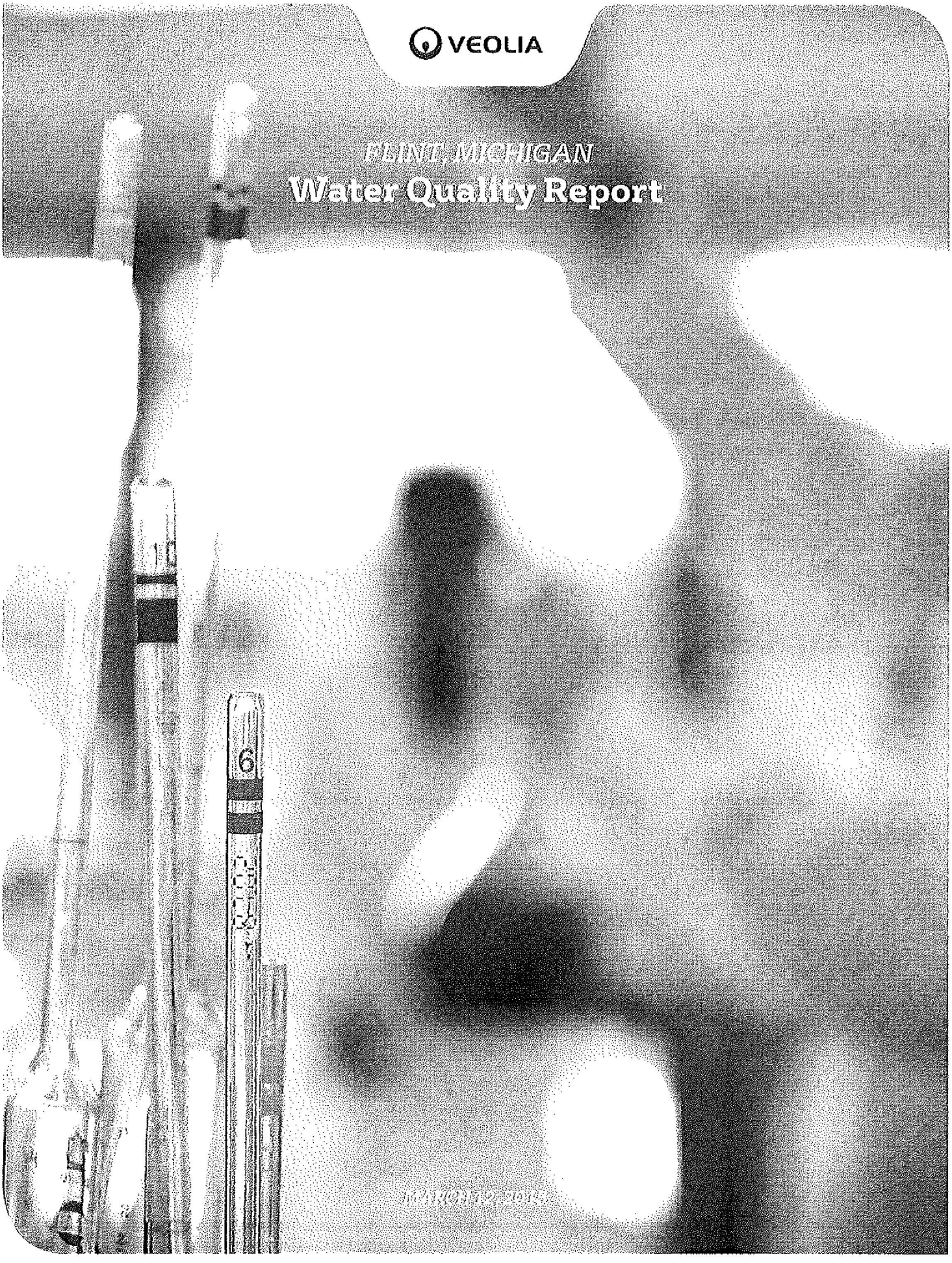
FLINT, MICHIGAN

Water Quality Report



MARCH 22, 2015

Water quality report **1**
> Executive Summary 1
> Review of actions taken to date 2
> State report 3
> Veolia's recommendations 4
> Conclusions and next steps 9
> Results expected 11

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Water Quality Report
March 12, 2015

FROM
Veolia North America

TO
Emergency Manager Gerald Ambrose

Executive Summary

The City of Flint changed water sources, transitioning from Detroit's system to the Flint River. This change created water treatment challenges that have resulted in water quality violations. Aging cast-iron pipe has compounded the situation, leading to aesthetic issues including taste, odor and discoloration. Public interest and scrutiny of the drinking water system intensified following the distribution of required public notices of violation.

The City of Flint has made a number of good decisions regarding treatment changes that have improved water quality. However, this is a very complex water quality issue and the City is seeking additional advice on what to do to ensure healthful drinking water for the community.

Veolia appreciates the City's decision to seek independent third parties to review current treatment processes, maintenance procedures and actions taken to date, and provide ideas for improvement. We are pleased to present this final report to the City of Flint following our experts' 160-hour assessment of the water treatment plant, distribution system, customer service and communications programs, and capital plans and annual budget.

This report provides recommendations and a roadmap for improvement, though our engagement was limited in scope. Our assessment included reviewing actions taken by the City to date, validating the City's plans going forward, and making recommendations for ideas not being considered.

Although a review of water quality records for the time period under our study indicates compliance with State and Federal water quality regulations, Veolia, as an operator and manager of comparable utilities, recommends a variety of actions to address improvements in water quality and related aesthetics including: operational changes and improvements; changes in water treatment processes, procedures and chemical dosing; adjustments in how current technologies are being used; increased maintenance and capital program activities; increased training; and, an enhanced customer communications program.

We are also providing a recommended schedule and estimated costs for implementing changes. It is our desire to help Flint residents and public officials better understand the current situation so that informed decisions can be made to ensure safe drinking water for the city's customers.

Review of Actions Taken to Date

To address water quality issues, the city has made operational changes, sought help from the State, hired engineering firm Lockwood, Andrews & Newnam, Inc. (LAN) to provide additional advice, and hired Veolia for an assessment from a utility operator's perspective. The City has also reached out to different specialty vendors (chemical suppliers, filter companies and tank aeration companies) for information about products to help with the TTHM issues. These are logical steps to take.

Flint is not alone in dealing with TTHM problems, as many utilities across the country are facing this challenge. The City appears to be following standard steps that many of those communities are taking to successfully correct the problem.

Although the primary focus of this review was based on solving the TTHM problem, the public has also expressed its frustration over discolored and hard water. Those aesthetic issues have understandably increased the level of concern about the safety of the water.

The review of the water quality records during the time of Veolia's study shows the water to be in compliance with State and Federal regulations, and, based on those standards, the water is considered to meet drinking water requirements.

The City has been proactive in its efforts to reach out to the medical community, to set up a phone number and email address to receive complaints, to post State Water Quality reports, to provide the list of EPA required water tests, and offer to test the water at customers' homes.

From our review, these numerous efforts demonstrate how the city is trying to be transparent and responsive beyond what many other communities might do in similar circumstances.

State Report

The Michigan Department of Environmental Quality (MDEQ) has requested specific actions be taken related to the total trihalomethane (TTHM) issues. The February 2015 report from LAN (*Operational Evaluation Report TTHM Formation Concern*) indicated apparent reasons for the elevated levels of TTHM in the distribution system. These generally relate to high Total Organic Carbon (TOC) in the water source, improperly operating equipment both in the plant and the distribution system, less-than-optimal plant TOC removal and old cast-iron pipe in the distribution system. **Our assessment confirms that these reasons are likely given our on-site laboratory testing and analysis, as well as our first-hand observations.**

Due to time constraints, LAN's report to the State was submitted prior to Veolia's final analysis and recommendations, and contained a number of key initial and contingent steps the City should consider, including:

Initial Actions

- Hire a Third Party Water Quality Expert to Complete Independent Audit
- Obtain a THM Analyzer
- Carry Out Jar Testing
- Water Plant Optimization Softening
- Water Plant Optimization Disinfection of Filter Beds (Pre-Chlorination)
- Water Plant Optimization Polymer Aid to Coagulation and Flocculation
- Increase Water Main Flushing
- Water Modeling Cedar Street Pump Recirculation
- Water Modeling West Side Pump Recirculation
- Broken Valve Locations
- Increase Flushing

Contingent Actions

- Fix Ozone System
- Start Feeding Coagulant and Flocculation Polymer
- Convert to Lime and Soda Ash Softening
- Change Disinfection to Chloramine or Chlorine Dioxide Temporarily
- Install Pre-Oxidant at Intake
- Replace Filter Media Implement Advanced Treatment
- Increase Main Flushing
- Continue Valve Replacement
- Emphasize Cast Iron Pipe Replacement

Veolia's Recommendations

While many of Veolia's recommendations match the initial assessment provided by LAN, our approach, as an operator and manager of comparable utilities, considers a more comprehensive solution. These improvements include operational changes, differences in water treatment regimes and chemical dosing, increased maintenance, and increased training.

- **Addition of Permanganate –** The addition of a permanganate chemical will help reduce ozone demand as well as chlorine demand. The reduction of ozone is needed to help eliminate the possibility of violating the bromate limit. The addition of the chemical will require state approval, submission of design documents for approval, procurement of the equipment and installation. The State has indicated they will work with the City on expediting review and approval of any requested changes. The required dosage of permanganate is estimated to range from 0.5 mg/L to 1.2 mg/L with a corresponding price of $160,000 to $320,000 per year. (Please note – The water in the river is dynamic which means it will change with weather, seasons and other factors. The estimates provided are based on bench testing at a given time and as such require the operators to test water and to verify chemical dosages on a frequent basis.)
- **Reduction of Ozone Feed** – Treating water is a delicate balance - increasing ozone to fix the TTHM problem can raise bromate levels to a point of violation. The introduction of permanganate is being recommended to reduce the demand for ozone so that feed rates will not exceed 5 mg/L. The current ozone dosing has been as high as 8 mg/L and, as such, if allowed to continue, will increase the risk of violating the bromate levels.
- **Increase of Ferric Chloride** – Four coagulants were tested by Veolia -ferric chloride, ferric sulfate, polyaluminum chloride (PACl) and aluminum chlorohydrate (ACH). Ferric chloride and ACH were found to be the best choice of product for effectiveness in removing TOC, a precursor to TTHM formation. Current ferric chloride dosages are too low and dosages of 100 mg/L or more are recommended. Again, please note, that the amount of chemical needed changes with the nature of the river and as such, water must be tested multiple times a day with corresponding changes in chemical dosages. This increase to 100 mg/L is twice what is currently being fed and much higher than what had previously been fed last year. The increase in chemical costs could be up to $1,000,000 per year. This change in dosage (using ferric chloride) can be made immediately without state permit review.
- **Reduction of Lime** – Lime is currently being overfed. A higher dosage of lime does not necessarily mean better treatment. A review of different dosages with jar testing indicates that the current dosage of 280 mg/L can be reduced to 230 mg/L. This represents a potential range of savings of up to $270,000 per year. This change can be made immediately. It should be noted that the current softening equipment is in poor condition, which does complicate the treatment process with a poor balance of flow between the two basins, weirs that are not level causing bypassing with the softener basins, and simply old mechanical equipment that periodically breaks down. This equipment is not going to be needed when a change to lake water occurs. Addition of soda ash to help further reduce hardness in cold weather might require dosages up to 40 mg/L with an annual chemical cost up to $320,000. There have also been some questions or complaints from the public regarding hard water. The water entering the plant is currently 360 mg/L and the plant is reducing that level of hardness to about 210 mg/L. Optimization of the dosage can reduce the hardness

further to about 180 mg/L. This reduction however has been sporadic as equipment breakdowns and high flows have caused problems keeping the softening process on-line. As we have noted before, the dosage needs to be adjusted daily or more often based on process control monitoring. The raw water hardness in the summer is much less than in the winter. For illustration purposes, the difference could be 360 mg/L in raw water in winter compared with 220 mg/Lin the summer.

- **Eliminate Pre-Chlorination on the Filters** – The reduction of pre-chlorination on the filters during the summer months can help reduce TTHM formation. This action has to be considered carefully with procedures documented and reviewed for engineering principles. As such, it will take time for the design engineer to determine what could be done to assure the proper chlorine contact time and document that other safety protocols in water are met. This requires state approval. Any submission should be considered along with a possible change in filter media. If Granulated Activated Carbon (GAC) is installed then the pre-chlorination would be stopped or drastically reduced because of the chlorine impact on the GAC filter media. Veolia's initial investigation into changes in chlorine feed point indicate that the recommended action can be accomplished while maintaining the required regulatory contact time for disinfection.
- **Change Filters to Granulated Activated Carbon (GAC)** – The object of the other changes being made is to reduce the TOC before chlorine is added into the process. The plant by design is limited on the amount of TOC removal possible. A maximum removal of only 60% is likely if the plant is properly optimized. The change of filter media to GAC would provide the best reduction possible and provide better than 90% removal dramatically reducing the potential for TTHM formation and thus ensuring compliance with that parameter for the water system. The change in filter media; however, is complicated requiring approval by the state, design of the changes, procurement of the media and a contractor to install it. That will take time and is likely in a range of $1.5 million (more or less) in cost. The use of GAC also requires more testing and monitoring of the media and the TOC than with the current media. GAC will accumulate TOC and begin to become in effective after a period of time. Depending upon the level of TOC reaching the filters this could be as short as 3 months and as long as 9 months. The amount of TOC is dependent upon the river water quality and operation of the other plant processes. Once the ability of the filters to remove TOC is diminished, the GAC media has to be replaced if river water continues as a source. The change to lake water will not require TOC removal and the media could continue to be used as filter media for that new water source.
- **Corrosion Control** – The primary focus of this study was to assure compliance with the TTHM limits. That is not the only problem facing the city and its customers though. Many people are frustrated and naturally concerned by the discoloration of the water with what primarily appears to be iron from the old unlined cast iron pipes. The water system could add a polyphosphate to the water as a way to minimize the amount of discolored water. Polyphosphate addition will not make discolored water issues go away. The system has been experiencing a tremendous number of water line breaks the last two winters. Just last week there were more than 14 in one day. Any break, work on broken valves or hydrant flushing will change the flow of water and potentially cause temporary discoloration.
- **Eliminate a Storage Tank** - The water system has more storage than it requires, due to excess capacity in the water lines in combination with the storage tanks. The City has already employed LAN to update the hydraulic model. The hydraulic model should be used to help determine if water levels can be lowered further and even to remove some storage tanks from service. That decision may need to be made

seasonally. For example demand during water main breaks last week required extensive amounts of water. The excess storage is more a problem with TTHM formation for the system in summer than winter.

- **Prioritize Valve Replacement** - The hydraulic model shows long water age in portions of the system that appear to be contributing to the TTHM problems. LAN has updated the model to include the location of broken valves and that added information is being used to identify other system problems. The City has a contract for valve turning and repair work that should be focused on known broken valves, particularly in sections of the distribution system with old water age. This activity however must wait until warmer weather in fear of causing problems in the water system with lines freezing.
- **Target and Increase Flushing** – Flushing the fire hydrants can be useful in cleaning out lines to minimize discolored water complaints and also helping reduce the age of water. This DOES NOT mean just opening hydrants. The hydraulic model needs to be used to determine which hydrants should be opened and for how long to ensure the lines are properly cleaned. For example, this might require 15 minutes or even several hours of flushing depending on location. The flushing of hydrants also needs to include records of hydrant condition, color of water initially and after periodic increments plus chlorine residual testing. All of that information will help provide information to the engineers on the effectiveness of the procedure. Each crew doing the work should be trained to help explain the process to the public and also warn neighborhoods about flushing so that staining of laundry can be avoided.
- **Change to Lake Water** – The changes being made now to the water plant will not be the same changes required to treat lake water once it becomes available. A thorough analysis and plan needs to be made in preparation of that switch. This is going to need to include changes in how the plant is operated, like eliminating lime softening and reducing the dosages of many chemicals. Consideration will also have to be given to algae treatment when lake water is being used.
- **Operating Programs** – All of the changes discussed above are based on testing and techniques proposed by engineers and skilled operators of both LAN and Veolia. The staff will need further training and implementation of detailed protocols to successfully implement the changes and to ensure long-term success at the plant. This means the City needs to implement a series of programs to ensure success in these changes.
    - **Process Control Management Plan** (PCMP) – The amount of testing and resulting changes in chemical dosages, along with monitoring the impact on the water, will require a well-documented process that all operators follow. An example of this is jar testing, which is used by the operators to identify the most effective chemicals and dosages to optimize treatment. The staff understands the basic treatment process but needs further practice and training to become proficient in the use of routine process control to adjust for water quality. This is commonly referred to as a PCMP and is used as a standard operating procedure so that the operators on the day shift can communicate with the night shift, that operators are following the same treatment plan for water, that the adjustments are unified between different shifts and different people, that a desired water treatment quality is defined and variations from it signal alarms and that the staff knows what to do when the water quality setpoints begin to drift away from its desired quality levels.
    - **Lab QA/QC** – The operation of the water plant is dependent upon accurate lab results. Standard operating procedure needs to be set and lab technicians trained in that process. EPA and the State

set procedures and standards to be met and the staff should strive to meet those standards. The City has already purchased a TTHM analyzer but should also consider a TOC analyzer that can be an online continuous device to provide immediate information on influent and effluent levels of TOC. Part of the lab records should be historical review of data to help operators better understand the changes they make in the plant.

- **Maintenance Management** – The key to water equipment is having all the equipment effectively maintained and functioning properly. The current capital program is fixing many broken pieces of equipment and updating the plant to current standards. This however must be followed with a rigorous maintenance program that ensures the proper preventive maintenance, is able to predict when maintenance is needed to keep equipment functioning properly and responsive to changes in flows and source water quality.
- **Training** – The changes being suggested are new to the staff and as such training needs to be provided in what the changes involve, why they are being made, the impact on the water quality, and how best to run the plant. A good demonstration of skill level is for the staff to become certified by the State as a licensed water plant operator. Many utilities now require all operators to hold at least the minimum certification level as a starting point and offer incentives to increase their certification level.

- **Communication Program** – The city should lay out an immediate, written strategy for communicating with the public in the short-term, as well as a 6-to-12 month strategy that contemplates known, future events like the KWA pipeline and switch to lake water. A wide range of activities are underway to work with the public but a comprehensive and coordinated effort, with a strategic focus, will help the utility and its customers.
  - **Dedicated Communications Personnel** – The City has a single, dedicated public information officer, tasked with providing service to all of city government. The current focus on communications support for Public Works, and the anticipated needs over the next several years, indicate the city would benefit from the hiring of a staff person in Public Works who could establish a communications program designed to provide clear and concise information to a broad audience though a number of different channels. In the interim, the city could hire a communications intern, local communications firm, or somebody with experience who is able to provide reduced or no-cost services for the immediate future.
  - **Communications Planning – Public Notification** – The City should be congratulated on its efforts to keep the public informed. It is posting its monthly reports on the web page to provide transparency, though these reports are highly technical – and may be too technical for the customer base at large. They are valuable to those customers who do want this level of detail. The city should create a single-page dashboard of information that outlines the water utility's performance for the previous month, post the dashboard on the website, print copies for distribution at customer service or other reception areas, and be provided during speaking engagements or other events. This dashboard should be easy to understand, and include:
    - The number of water quality tests conducted the previous month
    - The number of violations reported

  - Whether these results are in or out of compliance
  - Information about other proactive measures such as main and hydrant replacements, or other programs to improve performance of the water utility
  - Benchmarking information so the reader has a greater understanding of how Flint compares with other similar utilities in the region and across the country

- **Public Meetings** –There should be additional, proactive coordination with neighborhood, community and civic groups to provide speakers on timely topics. Given the list of numerous responsibilities, the Public Works director cannot do it alone – the city should identify three or four other staff members, knowledgeable about the water utility who can also speak to various groups, provide information and answer questions. The development of an outreach strategy to target key neighborhood, community and civic groups also will advance the communications effort and the dissemination of information in both the short and long term.
- **Standard tools** – Work crews in the field are often the faces of the utility – the city should create standardized tools for communicating with the public that can be easily and quickly delivered to the community in the event of main breaks, flushing or pre-planned capital improvements. Tools should include:
  - Door hangers for individual distribution
  - Yard signs with simple messaging to be placed near work-sites
  - A simple tri-fold brochure with useful information about the utility and appropriate contact information
  - Specific flyers about a range of topics
  - Infographics about how the water system works, from the intake to the customer's site
- **Change in Billing Format** – The City currently has no real way to reach all customers on a regular basis and provide information. The city should consider changing from a billing postcard to using an envelope and bill stuffer. Monthly or bi-monthly bill inserts are typically used to provide educational material for customers and are standard ways to provide information. Understandably, budget considerations must be taken into account.
- **Use Public Affairs Programming and Opportunities** – The news media has been covering this topic quite extensively – there are other media-related opportunities that may reach a wider audience. Taking advantage of these opportunities will help the city relay information to its customers and the community.
  - Participate in regular editorial-board meetings to provide background information and updates on key milestones or events.
  - Identify a local weekly television program and offer to provide guests to speak about key milestones or upcoming events.

Conclusions and Next Steps

The focus of this report is to help assure TTHM compliance and then improve general water quality. The City had good results in its most recent TTHM tests, although that is to be expected with the changes made to date and the cooler weather which contributes to low TTHM formation. Warm weather will be a different situation both in the nature of the Flint River water quality and in the formation of TTHM. With those changes coming, the City needs to act quickly to make improvements before additional testing takes place this spring and summer. The summary below provides the recommended actions, a priority for their implementation and projected costs either operational or capital. The costs are rough orders of magnitude and will vary with changes in water quality, operational decisions, and engineering choices being made and in some cases require State approval. Although a priority is assigned many of these actions can take place simultaneously.

Priority	Action	Annual Operational Cost	One Time Capital Cost
1	Implement operating programs for process control, lab QA/QC, maintenance, and training. These programs are needed regardless of the TTHM issue and will help with transition to lake water. The City has decided upon a central maintenance software and the water system should be the first to utilize this program since costs are already budgeted. These programs should be initiated immediately.	$ 25,000	$ 250,000 - $ 350,000
2	Contract with your engineer and initiate discussions with the State on the reduction of chlorine prior to the filters and changing the filter media to GAC. This activity has the longest time frame for design and approval, but also is extremely critical to assuring reduced TTHM production. The current filter cleaning and maintenance project needs to be adjusted to take into consideration the change in filter media both to dispose of the anthracite instead of cleaning and to install the GAC. This entire project needs to be done by early July to assure a flow of water throughout the system. Several months are required for the engineering design, State approval, bidding of work and installation of GAC and as such needs to begin now.	$ 0	$1,500,000
	Contract with your engineer and initiate discussions with the State on the addition of 0.5 to 1.2 mg/L of either potassium permanganate (dry) or sodium permanganate (liquid). This will take time to get approved and to implement. The use of liquid tanks at the raw water pump station may be the quickest and least expensive alternative for a temporary measure.	$ 160,000 - $ 320,000	$ 50,000

	Contract with your engineer and initiate discussions with the State on the addition of a corrosion control chemical. This action can be submitted and discussed with the state at the same time as the other chemical and filter changes saving time and effort. A target dosage of 0.5 mg/L phosphate is suggested for improved corrosion control.	$ 50,000	$ 50,000
3	Increase the ferric chloride dosage to 100 mg/L depending on river water TOC levels. (Lower TOC levels can be treated with less ferric chloride.) This change can be made now and is allowed by the State.	$ 1,000,000	$ 0
	Reduce the ozone feed rate to 5 mg/. This change can be done now and does not require State approval.	($50,000 – $100,000	$ 0
	Reduce the lime dosage to minimize hardness levels after softening. This will eliminate magnesium removal during treatment, but will also reduce total hardness. A reduction in carbon dioxide dosing for recarbonation treatment also is expected due to the reduction in lime feed. This change can be made now and does not require State approval.	($270,000)	$ 0
4	Confirm with the engineer when the revised hydraulic model will be completed and if necessary for time to focus on areas of longest water age if that would speed up the effort. Identify impact of reducing tank levels or eliminating a tank seasonally to improve water age. Include with this effort a list of hydrants to flush along with time required to assure drawing fresh water through the system. The engineer has been assigned this task already and confirmation of the timing of a delivery is needed.	$ 0	Already Contracted
	Ask the engineer to identify closed valves on a map that are impacting water age and that can be bid for replacement as soon as weather permits. Have the engineer identify areas of the system where the valve contractor should be focused on finding and fixing closed valves.	$ 0	Already Budgeted
5	Implement the recommendations in the communications program including a person assigned to public works education, using envelopes instead of cards along with bill stuffers for education and provide training for staff. Envelopes and bill stuffers are expensive and might be done periodically and not every month. The cost of TTHM notices, Annual Water Quality Reports and City notices should be figured into if any additional costs would exist. Many of these changes are underway now by the City.	Position Being Budgeted	

Notes

- The costs provided are rough order of magnitude which final engineering will firm up but will fluctuate with final decisions on engineering, operating technique and water quality.
- The change from river to lake water will dramatically cut the chemical costs as less is needed once the change occurs. This means that potassium permanganate will likely not be needed, ferric will drop as much as it went up, ozone levels will be lower and little lime will be needed.

Results Expected

The real question is what changes can be expected from these results in lowering the TTHM, improving the aesthetics and preparing for the change to lake water.

- TTHM – The City has already made great strides in reducing the TTHM levels with the changes already made. The additional suggestions by Veolia will further reduce TTHM in the water and help get the city released from the notices being provided to customers.
- **Hardness** – The hardness entering the plant this winter is 360 mg/L with the current system reducing it to 210 mg/L and optimization will reduce to about 180 mg/L. During the summer the levels will be lower probably in the 140 mg/L to 150 mg/L range. The target set by the current best operating practices is 120 mg/L to 150 mg/L.
- **Discolored Water** – The discolored water is caused by the old unlined cast iron pipe. The water from the plant can have an impact on discolored water, but a greater concern is the breaks and construction work that disrupt the flow of water causing discoloration. A polyphosphate is suggested to help bind the old cast iron pipe reducing instances of discolored water. This along with improve flow of water and programmed hydrant flushing will help, BUT WILL NOT eliminate discolored water occurrences.
- **Change to Lake Water** – The recommendations include the suggestion of programs to help the staff better manage the treatment process, additional testing to adjust the plant and additional lab monitoring, a maintenance program focused on keeping equipment properly functioning and more training for staff to improve their skill level. Those actions will prepare the staff for the change of water sources when it comes next year in addition to developing a thorough plan for the switch.

Resourcing the world

From: Wurfel, Brad (DEQ)
Sent: Tuesday, October 13, 2015 11:59 AM
To: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Krisztian, George (DEQ)
Cc: Saxton, Thomas (Treasury); Howard Croft (hcroft@cityofflint.com); Lasher, Geralyn (DHHS); Muchmore, Dennis (GOV)
Subject: FW: flint water

Steve, what's our role here and do we have an update to offer?
Howard, wanted you looped into this request if you've got anything to add.
Tom, heads up Fonger may be headed your way.
Geralyn, same FYI.
b

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Tuesday, October 13, 2015 9:50 AM
To: Wurfel, Brad (DEQ)
Subject: flint water

Hey Brad:
Where is the DEQ at with approving Flint's activation of the sections of Flint and Genesee County transmission pipe?
Howard Croft said yesterday that the city's line is disinfected and ready.
Also, I made a note to expect the corrosion control plan this week. Any word on that?
Thanks,

Ron Fonger
MLive Media Group
Reporter

[redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Hollins, Harvey (GOV)
Sent: Tuesday, October 13, 2015 12:08 PM
To: Muchmore, Dennis (GOV)
Subject: Re: What's the latest on Flint?

Just got out of meeting with Goodwill, I will shoot you an update when I get back to my office.

Best,
Harvey

On Oct 13, 2015, at 8:41 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

From: Wurfel, Brad (DEQ)
Sent: Tuesday, October 13, 2015 12:14 PM
To: Muchmore, Dennis (GOV)
Cc: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Krisztian, George (DEQ); Saxton, Thomas (Treasury); Howard Croft (hcroft@cityofflint.com); Lasher, Geralyn (DHHS)
Subject: RE: flint water

Thanks, Chief.
b

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 12:13 PM
To: Wurfel, Brad (DEQ)
Cc: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Krisztian, George (DEQ); Saxton, Thomas (Treasury); Howard Croft (hcroft@cityofflint.com); Lasher, Geralyn (DHHS)
Subject: Re: flint water

Be aware that the GCDC hasn't reached an agreement with GLWA to reconnect their transmission pipes. Lawyers are still talking.

Sent from my iPhone

On Oct 13, 2015, at 11:59 AM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

> **Steve**, what's our role here and do we have an update to offer?
> **Howard**, wanted you looped into this request if you've got anything to add.
> **Tom**, heads up Fonger may be headed your way.
> **Geralyn**, same FYI.
> b
>
> ---
>
> **From:** Ronald Fonger [mailto:RFONGER1@mlive.com]
> **Sent:** Tuesday, October 13, 2015 9:50 AM
> **To:** Wurfel, Brad (DEQ)
> **Subject:** flint water
>
> Hey Brad:
> Where is the DEQ at with approving Flint's activation of the sections of Flint and Genesee County transmission pipe? Howard Croft said yesterday that the city's line is disinfected and ready.
> Also, I made a note to expect the corrosion control plan this week. Any word on that?
> Thanks,
>
> **Ron Fonger**
> MLive Media Group
> Reporter
>
> [redacted]
> email rfonger1@mlive.com
> address 540 S. Saginaw St. #101, Flint MI 48502

From: Hollins, Harvey (GOV)
Sent: Tuesday, October 13, 2015 3:44 PM
To: Muchmore, Dennis (GOV)
Subject: RE: What's the latest on Flint?

Not much more than what's in the news. I made a couple of

- City Council voted to approve their $2 million to use GLWA
- People are still upset, believing that DEQ is covering up their mistake.
- Most elected officials are pointing fingers at the state.
- Bottled water delivery has slowed a tad.
- Various groups are still delivering water filters, a big filter distribution occurred over the weekend.
- Mayor Walling and his challenger Weaver are debating tonight.

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 8:41 AM
To: Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Subject: What's the latest on Flint?

From: Saxton, Thomas (Treasury)
Sent: Wednesday, October 14, 2015 8:12 AM
To: Muchmore, Dennis (GOV)
Subject: RE: What's the latest on Flint?

Sorry I didn't get back to you yesterday… you want the City in general [right?] vs the water system. Anyway we are pulling together some bullets on the former.

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 8:42 AM
To: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>
Subject: What's the latest on Flint?

Tom-
Where do they stand now on shortfalls, budget and costs of transition?

From: Saxton, Thomas (Treasury)
Sent: Wednesday, October 14, 2015 10:40 AM
To: Wyant, Dan (DEQ); Roberts, John (DTMB); Muchmore, Dennis (GOV)
Cc: Workman, Wayne (TREASURY); Baird, Richard (GOV); Khouri, Nick (TREASURY)
Subject: FW: Flint telephone call this morning

I assume we tell them to proceed? I am not aware of the timing on legislative action. The payt to DWSD will ultimately be paid out over time (e.g, say Nov thru June).

From: Byrne, Randall (Treasury)
Sent: Wednesday, October 14, 2015 10:21 AM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>
Cc: Schafer, Suzanne K. (Treasury) <SchaferS7@michigan.gov>
Subject: Flint telephone call this morning

Tom and Wayne:

During our telephone call today, Mayor Walling indicated that they have received the go ahead from the Drain Commissioner and are performing the bacti tests on the eight mile waterline. If all goes well, they may be able to begin to use DWSD water soon. The Mayor wanted to know if they can use DWSD water before the Legislature takes action on the $6M assistance package? Please advise.

Thanks,
Randy

Randall Byrne | State Administrative Manager
Local Government Services - Office of Fiscal Responsibility
State of Michigan | 430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
[redacted] | (517) 373-0633 (fax) | ByrneR1@michigan.gov

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From: Hollins, Harvey (GOV)
Sent: Wednesday, October 14, 2015 10:22 PM
To: Muchmore, Dennis (GOV)
Subject: Re: What's the latest on Flint?

Sheldon wants to be pulled in the same way that you pulled Ananich in.

Best,
Harvey

On Oct 14, 2015, at 4:06 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> Have you talked with Sheldon recently?
>
> ---
>
> **From:** Hollins, Harvey (GOV)
> **Sent:** Tuesday, October 13, 2015 3:44 PM
> **To:** Muchmore, Dennis (GOV) <muchmored@michigan.gov>
> **Subject:** RE: What's the latest on Flint?
>
> Not much more than what's in the news. I made a couple of
>
> - City Council voted to approve their $2 million to use GLWA
> - People are still upset, believing that DEQ is covering up their mistake.
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>
> ---
>
> **From:** Muchmore, Dennis (GOV)
> **Sent:** Tuesday, October 13, 2015 8:41 AM
> **To:** Hollins, Harvey (GOV) <hollinsh@michigan.gov>
> **Subject:** What's the latest on Flint?

From: Dayne Walling <dwalling@cityofflint.com>
Sent: Thursday, October 15, 2015 11:02 AM
To: Muchmore, Dennis (GOV); Workman, Wayne (TREASURY)
Cc: Natasha Henderson
Subject: Contract for Water

Gentlemen, I have asked City Administrator Natasha Henderson to reach out to you at Treasury Wayne about the contract for Detoit water. The Mott Foundation has questions about payments and ensuring all parties are contributing to the monthly costs as well as how an escrow fund would work to ensure funds are solely for this purpose. Time is of the essence as you know and the City is prepared to do all things necessary for the water to begin flowing as quickly as possible as we have agreed. Thanks for your tremendous efforts on this and we look forward to finalizing the agreements hopefully today or tomorrow.

--

Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
[redacted]
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: postmaster@senate.michigan.gov
To: 'senatorjananich@senate.michigan.gov'
Sent: Thursday, October 15, 2015 11:29 AM
Subject: Undeliverable: FW: PRESS RELEASE: RTAB Approves Resolution for the Use of $2 Million in Fund Balance to Reconnect to Detroit Water

Delivery has failed to these recipients or groups:
'senatorjananich@senate.michigan.gov'
This message was rejected by the recipient e-mail system. Please check the recipient's e-mail address and try resending this message, or contact the recipient directly.

Diagnostic information for administrators:
Generating server: BY1PR0501MB1368.namprd05.prod.outlook.com
senatorjananich@senate.michigan.gov
#< #5.1.10 smtp;550 5.1.10 RESOLVER.ADR.RecipientNotFound; Recipient not found by SMTP address lookup> #SMTP#
Original message headers:
Received: from DM2PR0501CA0024.namprd05.prod.outlook.com (10.162.29.162) by
BY1PR0501MB1368.namprd05.prod.outlook.com (10.160.200.28) with Microsoft SMTP
Server (TLS) id 15.1.293.16; Thu, 15 Oct 2015 15:28:51 +0000
Received: from BY2FFO11FD006.protection.gbl (2a01:111:f400:7c0c::153) by
DM2PR0501CA0024.outlook.office365.com (2a01:111:e400:5148::34) with Microsoft
SMTP Server (TLS) id 15.1.300.14 via Frontend Transport; Thu, 15 Oct 2015
15:28:51 +0000
Authentication-Results: spf=pass (sender IP is 136.181.192.169)
smtp.mailfrom=michigan.gov; senate.michigan.gov; dkim=none (message not
signed) header.d=none;senate.michigan.gov; dmarc=bestguesspass action=none
header.from=michigan.gov;
Received-SPF: Pass (protection.outlook.com: domain of michigan.gov designates
136.181.192.169 as permitted sender) receiver=protection.outlook.com;
client-ip=136.181.192.169; helo=coreosmtp1.michigan.gov;
Received: from coreosmtp1.michigan.gov (136.181.192.169) by
BY2FFO11FD006.mail.protection.outlook.com (10.1.14.127) with Microsoft SMTP
Server (TLS) id 15.1.293.9 via Frontend Transport; Thu, 15 Oct 2015 15:28:50
+0000
X-TM-IMSS-Message-ID: <94e0daa0000935c5@Michigan.gov>
Received: from HCS084EHUBPE003.som.ad.state.mi.us ([10.42.92.168]) by
Michigan.gov ([10.42.92.169]) with ESMTP (TREND IMSS SMTP Service 7.5;
TLSv1/SSLv3 AES128-SHA (128/128)) id 94e0daa0000935c5 ; Thu, 15 Oct 2015
11:28:44 -0400
Received: from HCS084EXHAPI003.som.ad.state.mi.us (10.42.9.101) by
HCS084EHUBPE003.som.ad.state.mi.us (10.42.92.168) with Microsoft SMTP Server

(TLS) id 8.3.389.2; Thu, 15 Oct 2015 11:28:43 -0400
Received: from GOV000EXCHPE005.som.ad.state.mi.us
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11:28:43 -0400
From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
To: "'senatorjananich@senate.michigan.gov'"
<senatorjananich@senate.michigan.gov>, "'Rep. Sheldon Neeley (District 34)'"
<SheldonNeeley@house.mi.gov>
CC: "Andy Leavitt (aleavitt@senate.michigan.gov)"
<aleavitt@senate.michigan.gov>
Subject: FW: PRESS RELEASE: RTAB Approves Resolution for the Use of $2
Million in Fund Balance to Reconnect to Detroit Water
Thread-Topic: PRESS RELEASE: RTAB Approves Resolution for the Use of $2
Million in Fund Balance to Reconnect to Detroit Water
Thread-Index: AQHRBs5eYL8kPYcOg0yeZNQ1rk4ClZ5srj/g
Date: Thu, 15 Oct 2015 15:28:44 +0000
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Accept-Language: en-US
Content-Language: en-US
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X-MS-TNEF-Correlator:
x-originating-ip: [10.42.58.210]
Content-Type: multipart/mixed;
boundary="_004_935743A3F359CE41B718F1B114E596E52A08F02BGOV000EXCHPE005_"
MIME-Version: 1.0
Return-Path: muchmored@michigan.gov
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X-EOPAttributedMessage: 0
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From: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Sent: Thursday, October 15, 2015 11:29 AM
Subject: FW: PRESS RELEASE: RTAB Approves Resolution for the Use of $2 Million in Fund Balance to Reconnect to Detroit Water
Attachments: RTAB Approves $2million.pdf

I know you've seen this but I wanted to make sure.

From: Jason Lorenz [mailto:jlorenz@cityofflint.com]
Sent: Wednesday, October 14, 2015 6:19 PM
Subject: PRESS RELEASE: RTAB Approves Resolution for the Use of $2 Million in Fund Balance to Reconnect to Detroit Water

For Immediate Release

RTAB Approves Resolution for the Use of $2 Million in Fund Balance to Reconnect to Detroit Water

Flint, Michigan – October 14, 2015 – The City of Flint's Receivership Transition Advisory Board has today approved a resolution that directs $2 Million in fund balance from the Water and Sewer funds be used to fund Flint's portion of the reconnection to Detroit as the City's water source. The Board voted unanimously to approve the measure which will compliment commitments by Governor Snyder in the amount of $6 million and the Charles Stewart Mott Foundation in the amount of $4 million, respectively, for a total reconnection cost of $12 million.

"Flint is one step closer to switching back to Detroit water with the board's approval," said Mayor Dayne Walling. "Now we need approval from the state treasurer and support from the state legislature and I urge them to act immediately." Approval from the legislature is required to finalize the negotiations with the Great Lakes Water Authority, formerly Detroit Water and Sewerage (DWSD). Once the contract between the Authority, Genesse County and the City are complete, Flint can once again begin receiving treated Lake Huron water from Detroit.

–END–

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039 (Office)
[redacted]
jlorenz@cityofflint.com

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

Jason Lorenz
Public Information Officer
Office: (810) 237-2039
[redacted]
jlorenz@cityofflint.com

For Immediate Release

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–END–

From: Workman, Wayne (TREASURY)
Sent: Thursday, October 15, 2015 11:31 AM
To: Dayne Walling; Muchmore, Dennis (GOV)
Cc: Natasha Henderson; Sygo, Jim (DEQ); Wyant, Dan (DEQ); Saxton, Thomas (Treasury); Byrne, Randall (Treasury)
Subject: RE: Contract for Water

Mayor, The state appropriation is being made to the DEQ. I have copied Director Wyant and his Chief Deputy Jim Sygo on this. We recommend a conference call with DEQ, Mott and the City to agree on payment procedures. It will be necessary to have a list of expenditure amounts for water and any other equipment, services and supplies that will total up to the $12,000,000 budget. Treasury will participate and help any way, but it is important DEQ , Mott and the City agree on the process. We can participate in a call today or Friday. Wayne

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Thursday, October 15, 2015 11:02 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Cc: Natasha Henderson <nhenderson@cityofflint.com>
Subject: Contract for Water

Gentlemen, I have asked City Administrator Natasha Henderson to reach out to you at Treasury Wayne about the contract for Detoit water. The Mott Foundation has questions about payments and ensuring all parties are contributing to the monthly costs as well as how an escrow fund would work to ensure funds are solely for this purpose. Time is of the essence as you know and the City is prepared to do all things necessary for the water to begin flowing as quickly as possible as we have agreed. Thanks for your tremendous efforts on this and we look forward to finalizing the agreements hopefully today or tomorrow.

--

Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
[redacted]
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Workman, Wayne (TREASURY)
Sent: Thursday, October 15, 2015 11:33 AM
To: Muchmore, Dennis (GOV); 'Dayne Walling'
Cc: Natasha Henderson
Subject: RE: Contract for Water

Just sent Mayor Walling an email to get this this started. DEQ is the lead for the State for disbursing funds.

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 15, 2015 11:24 AM
To: 'Dayne Walling' <dwalling@cityofflint.com>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Cc: Natasha Henderson <nhenderson@cityofflint.com>
Subject: RE: Contract for Water

Thanks Dayne, I'll get with Wayne.

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Thursday, October 15, 2015 11:02 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
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City Hall, 1101 S. Saginaw St.
Flint, MI 48502
[redacted]
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Workman, Wayne (TREASURY)
Sent: Thursday, October 15, 2015 11:33 AM
To: Muchmore, Dennis (GOV)
Subject: RE: Contract for Water

On it.

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 15, 2015 11:25 AM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Subject: FW: Contract for Water

Are you handling all this?

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Thursday, October 15, 2015 11:02 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Cc: Natasha Henderson <nhenderson@cityofflint.com>
Subject: Contract for Water

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Flint, MI 48502
[redacted]
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Dayne Walling <dwalling@cityofflint.com>
Sent: Thursday, October 15, 2015 2:40 PM
To: Workman, Wayne (TREASURY)
Cc: Muchmore, Dennis (GOV); Natasha Henderson
Subject: Re: Contract for Water

Thank you for the prompt response and the support

On Thu, Oct 15, 2015 at 11:32 AM, Workman, Wayne (TREASURY) <WorkmanW@michigan.gov> wrote:

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--
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mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Workman, Wayne (TREASURY)
Sent: Thursday, October 15, 2015 3:10 PM
To: Dayne Walling
Cc: Muchmore, Dennis (GOV); Natasha Henderson
Subject: RE: Contract for Water

We have reached out to DEQ to get a call organized.

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Thursday, October 15, 2015 2:40 PM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Cc: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Natasha Henderson <nhenderson@cityofflint.com>
Subject: Re: Contract for Water

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From: Muchmore, Dennis (GOV)
Sent: Thursday, October 15, 2015 11:24 AM
To: 'Dayne Walling' <dwalling@cityofflint.com>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Cc: Natasha Henderson <nhenderson@cityofflint.com>
Subject: RE: Contract for Water

Thanks Dayne, I'll get with Wayne.

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Thursday, October 15, 2015 11:02 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Cc: Natasha Henderson <nhenderson@cityofflint.com>
Subject: Contract for Water

Gentlemen, I have asked City Administrator Natasha Henderson to reach out to you at Treasury Wayne about the contract for Detoit water. The Mott Foundation has questions about payments and ensuring all parties are contributing to the monthly costs as well as how an escrow fund would work to ensure funds are solely for this purpose. Time is of the essence as you know and the City is prepared to do all things necessary for the water to

begin flowing as quickly as possible as we have agreed. Thanks for your tremendous efforts on this and we look forward to finalizing the agreements hopefully today or tomorrow.

--

Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
[redacted]
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

--

Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
[redacted]
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Hollins, Harvey (GOV)
Sent: Thursday, October 15, 2015 4:36 PM
To: Muchmore, Dennis (GOV)
Subject: Re: What's the latest on Flint?

The ministers did call and said thank you to both you and me.

Best,
Harvey

On Oct 15, 2015, at 10:42 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> I've met with both of them once, and I've talked with Ananich more than once on the phone because he called me. You've talked to him multiple times, and you're the lead. Don't know what he wants since he's getting to talk with you over and over. By the way, did our ministers call you and say "thank you Harvey, we couldn't get anyone else to listen to us and you did"?
>
> ---
>
> **From:** Hollins, Harvey (GOV)
> **Sent:** Wednesday, October 14, 2015 10:22 PM
> **To:** Muchmore, Dennis (GOV) <muchmored@michigan.gov>
> **Subject:** Re: What's the latest on Flint?
>
> Sheldon wants to be pulled in the same way that you pulled Ananich in.
>
> Best,
> Harvey
>
> On Oct 14, 2015, at 4:06 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>
> > Have you talked with Sheldon recently?
> >
> > ---
> >
> > **From:** Hollins, Harvey (GOV)
> > **Sent:** Tuesday, October 13, 2015 3:44 PM
> > **To:** Muchmore, Dennis (GOV) <muchmored@michigan.gov>
> > **Subject:** RE: What's the latest on Flint?
> >
> > Not much more than what's in the news. I made a couple of
> > - City Council voted to approve their $2 million to use GLWA
> > - People are still upset, believing that DEQ is covering up their mistake.
> > - Most elected officials are pointing fingers at the state.
> > - Bottled water delivery has slowed a tad.
> > - Various groups are still delivering water filters, a big filter distribution occurred over the weekend.
> > - Mayor Walling and his challenger Weaver are debating tonight.

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 8:41 AM
To: Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Subject: What's the latest on Flint?

From: Hollins, Harvey (GOV)
Sent: Friday, October 16, 2015 6:26 PM
To: Muchmore, Dennis (GOV)
Subject: Flint switches back to Detroit water system

Talk about a guy who loves throwing our guy under a bus.

http://www.abc12.com/news/headlines/Flint-switches-back-to-Detroit-water-system--333311441.html#.ViFue0Y0zMc.mailto

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Wednesday, October 21, 2015 10:43 AM
To: Muchmore, Dennis (GOV); Wyant, Dan (DEQ)
Subject: 10.21.15-Ananich-Letter-LevinAppointment-FINAL.pdf
Attachments: 10.21.15-Ananich-Letter-LevinAppointment-FINAL.pdf; ATT00001.txt

Good Morning Gentlemen,

Jim has placed a call to Senator Levin asking him if he would be interested in serving in some capacity on the Flint water review but they have not connected. To be fair to the Governor he wanted to make him aware that he would like Senator Levin to have a role in the process.

Thanks,

Andy

SENATE MINORITY LEADER
JIM ANANICH

517.373.0412
senjananich@senate.michigan.gov
senatedems.com/ananich

/jimananich @jimananich

October 21, 2015

State of Michigan
Executive Office of the Governor
P.O. Box 30013
Lansing, MI 48909

Governor Snyder,

You have stated you have plans to formalize an investigation into the Flint water crisis using an outside group of experts. As we have discussed, we should take care to appoint an individual who is highly qualified to investigate.

To that end, I request that you appoint former Senator Carl Levin as chair of any panel you create. As you are surely aware, Sen. Levin served as the chair of the Permanent Subcommittee on Investigations during his tenure in the Senate, in addition to a number of other government oversight subcommittees.

Even now, Sen. Levin is sharing his passion for aggressive government oversight at Wayne State University, where he teaches students how to use investigatory tools to improve public policy, and serves as chair of the new Levin Center. I cannot think of an individual better suited to restoring trust in our state government.

Please strongly consider my suggestion and help us take steps to ensure a thorough and accurate investigation.

Sincerely,

Jim Ananich
Senate Democratic Leader
District 27

cc:
Dan Wyant, MDEQ

Sent from my iPhone

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Wednesday, October 21, 2015 12:13 PM
To: Muchmore, Dennis (GOV)
Subject: Re: 10.21.15-Ananich-Letter-LevinAppointment-FINAL.pdf

Hi Dennis,

Jim spoke with Senator Levin. I think it is worth us talking about. Do you have time to chat today?

On 10/21/15, 10:42 AM, "Andrew Leavitt" <ALeavitt@senate.michigan.gov> wrote:

>Good Morning Gentlemen,
>
>Jim has placed a call to Senator Levin asking him if he would be interested in serving in some capacity on the Flint water review but they have not connected. To be fair to the Governor he wanted to make him aware that he would like Senator Levin to have a role in the process.
>
>Thanks,
>
>Andy
>

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Wednesday, October 21, 2015 1:08 PM
To: Muchmore, Dennis (GOV)
Subject: Re: 10.21.15-Ananich-Letter-LevinAppointment-FINAL.pdf

Let me know what time works. They should certainly be involved but I think for our community to feel respected and restore trust it will take someone like Senator Levin. He has longstanding relationships with the community and is trusted.

On 10/21/15, 12:50 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

>Hi Andy, sure we can talk more. We thought if we put the pediatrician from Hurley on it would be better optics wise.
>
>> On Oct 21, 2015, at 12:12 PM, Andrew Leavitt <ALeavitt@senate.michigan.gov> wrote:
>>
>> Hi Dennis,
>>
>> Jim spoke with Senator Levin. I think it is worth us talking about. Do you have time to chat today?
>>
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>>>
>>> Thanks,
>>>
>>> Andy
>>>

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Wednesday, October 21, 2015 1:35 PM
To: Muchmore, Dennis (GOV)
Subject: Re: 10.21.15-Ananich-Letter-LevinAppointment-FINAL.pdf

I think it would be helpful if we talk before you guys go forward.

On 10/21/15, 1:26 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

>They're ready to announce the work group so I'll pitch to add Carl as a recommendation from Jim.
>
>> On Oct 21, 2015, at 1:08 PM, Andrew Leavitt <ALeavitt@senate.michigan.gov> wrote:
>>
>> Let me know what time works. They should certainly be involved but I think for our community to feel respected and restore trust it will take someone like Senator Levin. He has longstanding relationships with the community and is trusted.
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>>>>>
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>>>>>
>>>>> Thanks,
>>>>>

>>>>> Andy
>>>>>

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Wednesday, October 21, 2015 3:05 PM
To: Muchmore, Dennis (GOV); Jim Ananich ([redacted])
Subject: Re: Dr. Reynolds

Dennis you and I both know Carl deserves more respect than to be an ex-officio to this group. He could have done this right.

From: "Muchmore, Dennis (GOV)"
Date: Wednesday, October 21, 2015 at 3:03 PM
To: "Jim Ananich ([redacted])", Andrew Leavitt
Subject: Dr. Reynolds

I have recommended Carl be added to the Commission. Since they won't really be a voting body I suggested he be added as an ex-officio member. Here is the rec for the Hurley person.

> Dr. Lawrence Reynolds from Flint to join our After Action team.
> He's been a long time pediatrician in Flint. Well respected in the community.
> He was affiliated with Mott Children Health Center for several years, but is listed as affiliated with Hurley now.
> His background looks excellent.

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Wednesday, October 21, 2015 3:46 PM
To: Muchmore, Dennis (GOV)
Cc: Jim Ananich ([redacted])
Subject: Re: Dr. Reynolds

Larry is awesome but he admittedly is not the person to thoroughly review employee policies within a department? How a culture got so bad in the City of Flint and DEQ's water departments that no one thought they should step up and try and stop this. This is as much HR and bureaucracy knowledge as it is lead issues.

I think we see this as two parts.

One being policy, which Sikkema/Kolb et al will do great at.

Two being oversight, ensuring all the bad actors from state and local government are held accountable and that the people of Flint get the answers they are so desperately are searching for.

We believe this group lacks the ability in the latter department. That's why Levin doing something would be tremendous. He seemed generally interested.

On 10/21/15, 3:35 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

>The ex-officio was just an idea from me because the commission had already been impaneled. I'll suggest other alternatives. I actually liked the idea because it would give him some flexibility time wise. Dr. Reynolds is very solid and lives in Flint so I think he's a great choice.
>
>Sent from my iPhone
>
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>
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>
>
>
>From: "Muchmore, Dennis (GOV)"
>Date: Wednesday, October 21, 2015 at 3:03 PM
>To: "Jim Ananich ([redacted])", Andrew Leavitt
>Subject: Dr. Reynolds
>
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>Dr. Lawrence Reynolds from Flint to join our After Action team.
>He's been a long time pediatrician in Flint. Well respected in the community.
>He was affiliated with Mott Children Health Center for several years, but is listed as affiliated with Hurley now.

>His background looks excellent.
>
>
>

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Wednesday, October 21, 2015 5:59 PM
To: Muchmore, Dennis (GOV)
Subject: Re: Dr. Reynolds

Thank you, Dennis.

Jim feels strongly that Governor should talk to Carl and have a conversation.

Sent from my iPhone

> On Oct 21, 2015, at 5:46 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>
> I made the request as a regular member
>
> Sent from my iPhone
>
>> On Oct 21, 2015, at 3:45 PM, Andrew Leavitt <ALeavitt@senate.michigan.gov> wrote:
>>
>> Larry is awesome but he admittedly is not the person to thoroughly review employee policies within a department? How a culture got so bad in the City of Flint and DEQ's water departments that no one thought they should step up and try and stop this. This is as much HR and bureaucracy knowledge as it is lead issues.
>>
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>>
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>>
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<ALeavitt@senate.michigan.gov<mailto:ALeavitt@senate.michigan.gov>> wrote:
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>>> Date: Wednesday, October 21, 2015 at 3:03 PM
>>> To: "Jim Ananich ([redacted])", Andrew Leavitt
>>> Subject: Dr. Reynolds
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>>> He's been a long time pediatrician in Flint. Well respected in the community.
>>> He was affiliated with Mott Children Health Center for several years, but is listed as affiliated with Hurley now.
>>> His background looks excellent.
>>>
>>>
>>>

From: Rep. Sheldon Neeley (District 34) <SheldonNeeley@house.mi.gov>
Sent: Thursday, October 22, 2015 3:43 PM
To: Khouri, Nick (TREASURY)
Cc: GovernorsOffice; Muchmore, Dennis (GOV); Workman, Wayne (TREASURY); nhenderson@cityofflint.com
Subject: State Portion of Flint Water Reconnection
Attachments: Treasury Letter.pdf

Please see attached letter. Thanks for your cooperation.

Sheldon

34TH DISTRICT
STATE CAPITOL
P.O. BOX 30014
LANSING, MI 48909-7514
PHONE: (517) 373-8808
FAX: (517) 373-5997
E-MAIL: sheldonneeley@house.mi.gov

MICHIGAN HOUSE OF REPRESENTATIVES

SHELDON A. NEELEY

ASSISTANT DEMOCRATIC WHIP
STATE REPRESENTATIVE

COMMITTEES:
HEALTH POLICY
LOCAL GOVERNMENT
TRANSPORTATION AND
INFRASTRUCTURE

October 22, 2015

Department of the Treasury
State of Michigan

Dear Treasurer Nick A. Khouri,

I write to you today concerning a serious matter involving the city of Flint and its switch to the Detroit water system.

Flint prepaid an escrow account of $10 million for the switch and the state was obligated to significantly assist in this payment. The Detroit Water Authority required this set-up prior to restoration of the water service to Flint. As a result, the city has expended substantial resources beyond their commitment in order to activate restoration of service.

Furthermore, the Ruth Mott Foundation will not release their supplemental funds because they subscribe to the plan of release for state funds.

I am asking you and the Department of the Treasury to release the remaining agreed upon funds, otherwise the city of Flint will face financial hardships even more disastrous than it has previously seen.

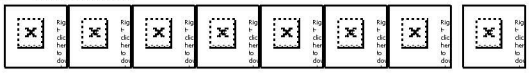
For the Love of the Community,

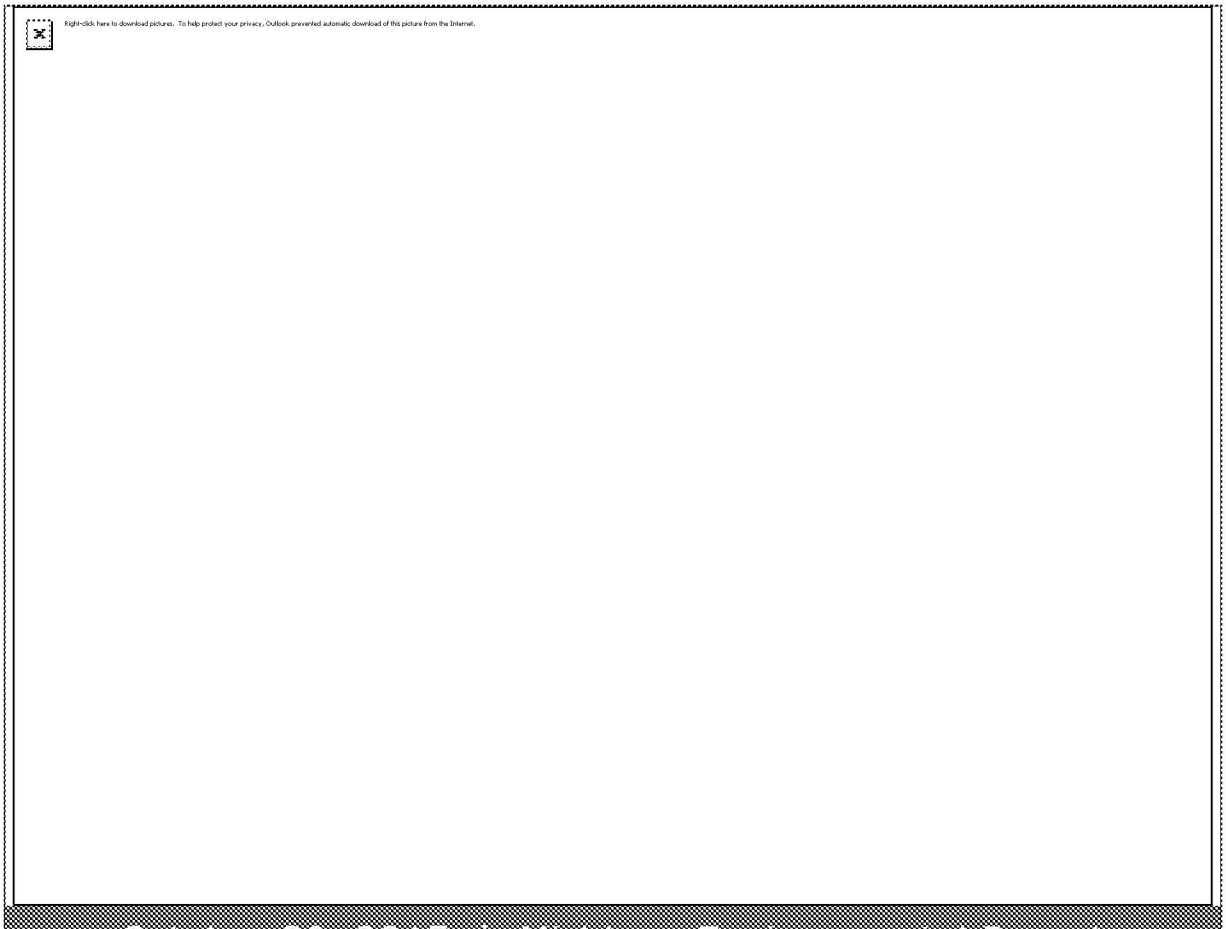
Sheldon A. Neeley, State Representative
34th District

CC: Governor Rick Snyder
Dennis Muchmore
Wayne Workman
Natasha Henderson

From: Chris Kolb, Michigan Environmental Council <chris@environmentalcouncil.org>
Sent: Friday, October 30, 2015 1:42 PM
To: Muchmore, Dennis (GOV)
Subject: How air toxics rule changes fail public health | Michigan Environmental Report

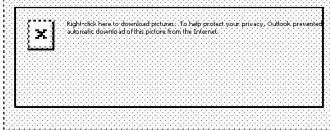
To view this email as a webpage click here



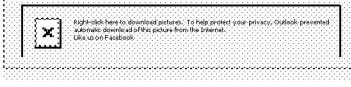


October 30, 2015 | Michigan Environmental Report

Support MEC



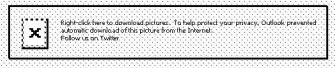
Be Social

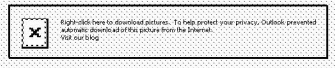


Dear Dennis,

The Flint water crisis puts a spotlight on public health and the critical role our state's laws and regulations -- and how they are put into practice -- play in protecting the health of Michiganders.

Last week Governor Snyder appointed me to serve on the after-incident review task force regarding the Flint water issue. Ken Sikkema and I will serve as co-chairs. The Governor was very clear that he wants us to find out what happened and why, and how to prevent any similar situation from occurring in the future. The task force will make recommendations to the administration, including and not limited to, whether laws and regulations need to change





and whether there are practices that need to take place in water systems across the state. We are determined to shine a bright light on this unacceptable tragedy and provide much needed answers.

This week is National Lead Poisoning Prevention Week, and our blog post on the Flint water crisis covers why lead in drinking water is so significant. It gives an overview of the situation in Flint, along with policy changes needed now to restore public trust.

Also this week, the Michigan Department of Environmental Quality's proposed air toxics rule change is now open for public comment. It's our position that companies using chemicals -- and reaping the financial benefits of that use -- should bear the burden of demonstrating they are safe before emitting them into the air we breathe. Instead, the draft rule transfers to those living next to a factory the risk that the chemicals emitted can cause cancer or have other negative health consequences. This change is not acceptable.

When an emergency happens, it's an important and serious duty to review what went wrong and recommend what can make it right. It's even more important to fix our systems -- laws, regulations, and practices -- to protect public health in the first place.

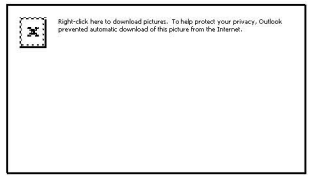
Day in and day out, that is what we work to do at the Michigan Environmental Council.

Sincerely,

Chris Kolb
President

Michigan Distilled

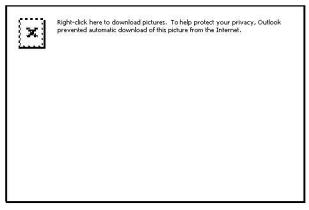
Flint water crisis: Policy changes needed to restore public trust



In what has become a national news story and a full-fledged public health emergency, state officials now acknowledge that unsafe drinking water has exposed children, pregnant women and other Flint residents to dangerous levels of lead. Our blog post identifies some measures the state should take as soon as possible.
READ MORE

Air Pollution

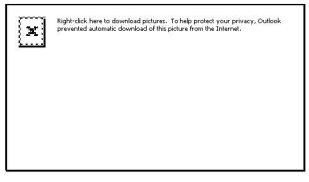
Air toxics rule changes fail to put public health first



Changes to state regulation of toxic air emissions proposed this week by the Michigan Department of Environmental Quality would raise the risk of serious health impacts among Michigan families, particularly in vulnerable communities. The department announced that it is moving forward with a proposed administrative rule change requested by industry to deregulate 500 toxic chemicals which have been subject to oversight in the past. READ MORE

Sustainability

Fish farms don't belong in the Great Lakes

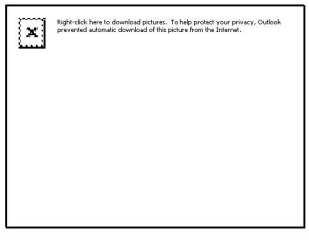


Michigan Trout Unlimited, MUCC & MEC op-ed

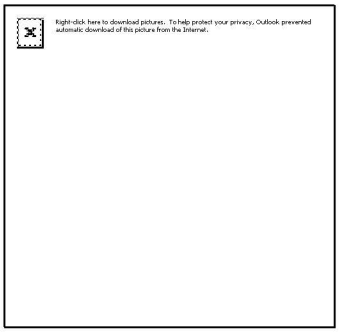
Multiple proposals to put fish farms in our shared Great Lakes waters are under consideration by state officials. We find it deeply troubling that this idea is even on the table. READ MORE

Water & Health

Task force appointed to examine Flint water controversy



Gov. Rick Snyder appointed an independent task force to examine the controversy over Flint's tainted water. The task force will look into the actions that went into water use in the beleaguered city, as well as the testing that took place on the water after the city switched from Detroit's water and sewerage system to pulling water out of the Flint River. READ MORE



MICHIGAN ENVIRONMENTAL COUNCIL

Your voice at the Capitol

Since 1980, the Michigan Environmental Council has been at the forefront of efforts to protect our Great Lakes, promote sustainable communities, safeguard public health and establish clean energy policies for a more vibrant economy. Representing over 70 member organizations throughout the state, MEC provides agenda-setting leadership at the State Capitol and with our Congressional delegation in Washington.

Forward this email

This email was sent to muchmored@michigan.gov by chris@environmentalcouncil.org | Update Profile/Email Address | Rapid removal with SafeUnsubscribe™ | About our service provider.

Michigan Environmental Council | 602 W. Ionia Street | Lansing | MI | 48933

From: Workman, Wayne (TREASURY)
Sent: Thursday, November 12, 2015 11:31 AM
To: Muchmore, Dennis (GOV); Saxton, Thomas (Treasury)
Subject: RE: Flint

Not very soon. They have only been there 6 months and the City now has a very large deficit in the Water Fund. We talked with the new Mayor about it on Tuesday. I will probably be in Flint next week with the Mayor and City Administrator.

From: Muchmore, Dennis (GOV)
Sent: Thursday, November 12, 2015 11:13 AM
To: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Subject: Flint

Now that the election is past and we are looking forward, how soon do you see us getting rid of the RTAB?

From: Egan, Paul <pegan@freepress.com>
Sent: Thursday, November 19, 2015 11:17 AM
To: Muchmore, Dennis (GOV)
Subject: Flint water

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Dennis: Some time ago I obtained former Treasurer Andy Dillon's appointment calendar, under FOIA.
On March 25, 2013, at 5 p.m., it lists: "Call with Dennis Muchmore regarding Flint Water Supply Alternatives."
Later that evening, the city council of Flint, which was under a state-appointed emergency manager, voted to switch its water supply from the city of Detroit to a new Karegnondi Water Authority.
Can you please call me to discuss your/the state's role in that decision?
Also, for another time, maybe in December, would love to do an exit interview before you leave your current post.
Thanks, Paul
o. 517-372-8660
c. [redacted]

From: Andy Dillon <adillon@conwaymackenzie.com>
Sent: Thursday, November 19, 2015 2:04 PM
To: Saxton, Thomas (Treasury); Muchmore, Dennis (GOV); Baird, Richard (GOV)
Subject: Fwd: Flint water

I am not anxious to respond to him but my experience of ignoring him hasn't been very productive.

He is focused in on a relevant question.

Andy Dillon
Conway MacKenzie Inc.
401 S. Old Woodward Avenue, Suite 340, Birmingham, MI 48009
248.952.8868 (office) | [redacted] 248.433.3143 (fax)
adillon@conwaymackenzie.com

---------- Forwarded message ----------
From: **Egan, Paul** <pegan@freepress.com>
Date: Thu, Nov 19, 2015 at 1:48 PM
Subject: Flint water
To: "ADillon@ConwayMacKenzie.com" <ADillon@conwaymackenzie.com>

Hi Andy: Why did the state and city opt to go with KWA for Flint water supply when the study you commissioned from Tucker, Young, Jackson, Tull found that going with KWA would be more costly than staying with DWSD? (Here is excerpt from p. 17):

"Based on the analysis, it is prudent to assume the KWA water supply option costs would be somewhere between the KWA-1 and KWA-2 options. Therefore, the analysis indicates that the two DWSD options of supplying 8 MGD on a maximum day and up to 8 MGD on average are the least cost options for Flint. These options allow Flint to maximize the use of existing assets; the City of Flint's (the Flint WTP) and DWSD's (the existing 72-inch main)."

How would you describe your role in the chain of decisions that led to Flint drawing its water supply from the Flint River?

The Flint City Council opted to go with the KWA on the evening of March 25, 2013. Your schedule shows you had a 5 p.m. phone conversation at 5 p.m. that day with Dennis Muchmore "regarding Flint Water Supply alternatives."

The next day, March 26, 2013, your schedule shows a 9 a.m. meeting at Treasury "regarding Flint water, a 1:30 p.m. phone call with Dan Wyant "regarding Flint/KWA," and a w p.m. meeting in Lansing with Flint Mayor Dayne Walling?

What do you recall about these conversations/meetings? Did Muchmore sign off on the switch to KWA on behalf of the governor?

Thanks, Paul Egan

Detroit Free Press

Cell [redacted]

From: Elizabeth Murphy <emurphy@cityofflint.com>
Sent: Friday, January 09, 2015 4:22 PM
To: ABC12news; Adams, Dominic; Angie Hendershot; Assoc. Press; Audrey Martini; Bill Harris-WEYI; Carrie Sharp; Cathy Shafran-MLIVE; Courier News; Darnell Earley; Dave Waymire; David Harris-MLIVE; Dawn Jones; Dayne Walling; Muchmore, Dennis (GOV); East VillageNews; Koryzno, Edward (Treasury); Elaine Redd; Elizabeth Murphy; Emily Nelson; Eric Mays, Ward 1; Franklin, Matthew; Hollins, Harvey (GOV); Ian Rubin-WNEM; Inez Brown; Jake May; Janell Johnson; Jason Caya; Jason Cooper; Jason Lorenz; Jennifer Christenson; Jeremy Allen; Jessica Pressley; Joel Feick-WEYI; Joshua M. Freeman, Ward 4; Kate Wells; Kristin Longley-MLIVE; Kristin Moore; Lilly Brian; Lola Larkin; Marc 'Marcobson' Jacobson; Marjory Raymer; Maxine Murray; Michael Brown; Michael Rust; Michigan Radio; Mickle, Bryn; Monica Galloway, Ward 7; Mookie Wilson-WJRT; NBC25 Newsroom; Neille Giffune; Nicole Byilingiro; Nina Sika-WNEM; Patrick Wilson-WJRT; Byrne, Randall (Treasury); Randy Conat; Baird, Richard (GOV); Ridley, Gary; Roberto Acosta-MLIVE; Ron Fonger; Wurfel, Sara (GOV); Scott Kincaid, Ward 9; Stephanie Hackney; Steve Carmody-MPR; Stanton, Terry A. (Treasury); Thorne, Blake; Tom Lenard; Tony Cuttitta; Vicki VanBuren, Ward 8; Wantwaz Davis, Ward 5; Workman, Wayne (TREASURY); WFLT 1420am; WNEM
Subject: PRESS RELEASE - Flint Emergency Manager's Statement on Residents' Water Concerns
Attachments: Flint Water Statement 010915.pdf

For Immediate Release

Emergency Manager Statement on Residents' Flint River Water Concerns

Flint, Michigan – January 9, 2015 – The City of Flint's Emergency Manager Darnell Earley today released a statement regarding residents' Flint River water safety concerns following the distribution of the total trihalomethanes violation letter:

"Suggestions have been made that the City of Flint should return to using water purchased through the Detroit Water and Sewerage Department (DWSD). For many reasons, financial and otherwise, the City of Flint can ill-afford to switch courses at this point. Thus, we will continue to follow the guidelines and directives of the Michigan DEQ in the implementation of our water quality plan and operational report, until the KWA water source is available. The estimated cost to go back to the water provided by the DWSD is approximately $1 million per month and the City expects to be using the Karegnondi Water Authority (KWA) Lake Huron water within the next eighteen months. It is not financially prudent to spend $18 million to purchase water that meets the same DEQ standards as the water now available from the Flint River.

However, because of the concerns raised by the public, as well as the city council and our state legislative delegation, we want to make sure that the Flint water treatment operation is doing everything it can to address the challenges outlined in the recent violation notice issued by the State Department of Environmental Quality (DEQ). We will be seeking river water management consultants with extensive treatment expertise to work with the Flint Utilities Department staff to assure that best practices are being used for treatment and

distribution of the Flint River water. This is a much better use of the City's limited funds than trying to pursue a course back to DWSD."

–END–

--
Liz Murphy
Assistant to the Emergency Manager
City of Flint
810 237 2025

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
DARNELL EARLEY
ICMA-CM, MPA

Jason Lorenz
Public Information Officer
(810) 237-2039
jlorenz@cityofflint.com
Elizabeth Murphy
(810) 237-2025
emurphy@cityofflint.com

For Immediate Release

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-CONTINUE-

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
DARNELL EARLEY
ICMA-CM, MPA

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–END–

City Hall
1101 S. Saginaw Street - Flint, Michigan 48502
810-766-7346 FAX: 810-766-7218 www.cityofflint.com

From: Hollins, Harvey (GOV)
Sent: Friday, November 13, 2015 4:22 PM
To: Muchmore, Dennis (GOV)
Subject: Water pipeline vs. Flint River: City of Flint studying its drinking water options | MLive.com

There's more, but our friend Neeley forgets.
http://www.mlive.com/news/flint/index.ssf/2011/01/water_pipeline_vs_flint_river.html

Best,
Harvey

From: Wurfel, Brad (DEQ)
Sent: Thursday, February 05, 2015 2:15 PM
To: Muchmore, Dennis (GOV); Murray, David (GOV); Wurfel, Sara (GOV)
Cc: Stanton, Terry A. (Treasury)
Subject: Fwd: pastor harris

Thoughts on this? Who responds? How?

Sent from my iPhone

Begin forwarded message:

> **From:** "Fonger, Ronald" <RFONGER1@mlive.com>
> **Date:** February 5, 2015 at 1:06:36 PM EST
> **To:** "wurfelb@michigan.gov" <wurfelb@michigan.gov>
> **Subject: pastor harris**
>
> Brad:
> I just spoke with Pastor Harris, the president of the Concerned Pastors for Social Action.
> He said the group asked that Flint be immediately re-connected to Lake Huron water during yesterday's meeting and is expecting a response of some kind by the beginning of next week.
> Would you or Dave Murray want to comment on whether that's under consideration?
> I just wanted you guys to know what he's saying – without equivocation – in the story.
> Thanks,
>
> **Ron Fonger**
> MLive Media Group
> Reporter
>
> mobile [redacted]
> email rfonger1@mlive.com
> address 540 S. Saginaw St. #101, Flint MI 48502

From: Stanton, Terry A. (Treasury)
Sent: Thursday, February 05, 2015 2:19 PM
To: Wurfel, Brad (DEQ); Muchmore, Dennis (GOV); Murray, David (GOV); Wurfel, Sara (GOV)
Subject: RE: pastor harris

Follow Up Flag: Follow up
Flag Status: Flagged

Would add that the city (Earley, Ambrose, etc.) have been unequivocal that doing so would cost at least $1m per month...per the DWSD "offer"...and the city simply cannot afford that.

I have also heard that the city no longer owns a section of pipeline that would have to be used in making any re-connection...making that more difficult and expensive.

From: Wurfel, Brad (DEQ)
Sent: Thursday, February 05, 2015 2:15 PM
To: Muchmore, Dennis (GOV); Murray, David (GOV); Wurfel, Sara (GOV)
Cc: Stanton, Terry A. (Treasury)
Subject: Fwd: pastor harris

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> Thanks,
>
> **Ron Fonger**
> MLive Media Group
> Reporter
>
> mobile [redacted]
> email rfonger1@mlive.com

address 540 S. Saginaw St. #101, Flint MI 48502

From: Workman, Wayne (TREASURY)
Sent: Wednesday, February 11, 2015 3:02 PM
To: Saxton, Thomas (Treasury); Hollins, Harvey (GOV); Baird, Richard (GOV); Muchmore, Dennis (GOV)
Subject: Fwd: Flint water
Attachments: Flint Rate Study Report Final Draft v6.docx; ATT00001.htm

See below from Jerry

Sent from my iPhone

Begin forwarded message:

> **From:** "Gerald Ambrose" <gambrose@cityofflint.com>
> **To:** "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>
> **Cc:** "Widigan, Robert (TREASURY)" <WidiganR@michigan.gov>, "amooney@cityofflint.com" <amooney@cityofflint.com>, "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>
> **Subject: Re: FW: Flint water**
>
> We followed the recommendations of the RFC rate study. Their recommendations encompassed the knowledge of leaving DWSD, as well as the impending increase in costs associated with KWA once connected (City share of debt service), and the need for significant reinvestment in the utility system infrastructure, and a desire to level out future rate increases.
>
> Copy of the RFC study attached.
>
> Jerry
>
> On Wed, Feb 11, 2015 at 12:31 PM, Workman, Wayne (TREASURY) <WorkmanW@michigan.gov<mailto:WorkmanW@michigan.gov>> wrote:
> Please see Harvey`s question as to rationale for 2014 rate increase
>
> From: Hollins, Harvey (GOV)
> Sent: Wednesday, February 11, 2015 12:27 PM
> To: Saxton, Thomas (Treasury)
> Cc: Muchmore, Dennis (GOV); Wisniewski, Wendy (GOV); Workman, Wayne (TREASURY)
> Subject: Re: Flint water
>
> Why did the rates go up after the connection to the Flint river?
>
> Best,
> Harvey
>
> On Feb 11, 2015, at 12:21 PM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov<mailto:SaxtonT@michigan.gov>> wrote:
> Dennis – the attached pdf is the memo & table that hopefully addresses some of the info needs

stemming from the meeting with the pastors last week. Jerry A. has looked at this document as well. In terms of key items at this point (that are mentioned in the memo)….

KWA may be hooked up by the end of this calendar year; weather permitting, etc. Even allowing for some slippage that is positive news

Whether you hooked to DWSD thru the county or directly; it is a $1mm add'l impact to the budget… an add'l 30% increase in rates over existing

They have $2mm already baked in the budget to fix that two mile 'bad' section of pipeline that might address a good portion of the current issues

They now have an outside consultant on the ground who is suppose to provide some preliminary indications next week to help improve the situation

Don't forget about the $2mm SRF loan restructuring (which we have not officially put on the table). Those $s would be available for more system improvements.

Again, sorry this took as long as it did. Let us know if this is what you had in mind or if you need anything else. Wayne – chime in if I missed anything.

See you @ 1:30

<FlintWater.pdf>

RAFTELIS
FINANCIAL CONSULTANTS, INC.

CITY OF FLINT

Water and Wastewater Rate Study

Final Report |June 19, 2014

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1. EXECUTIVE SUMMARY

1.1 BACKGROUND OF THE STUDY

On November of 2013, the City of Flint ("City") engaged Raftelis Financial Consultants ("RFC") to perform water and wastewater utility rate studies. The scope of services included the following:

- Evaluate the adequacy of existing water and wastewater revenues to meet each utility's projected revenue requirements
- Develop comprehensive water and wastewater financial plans based on sound financial management practices for a 10 year forecast period
- Determine water and wastewater rates which adequately recover the cost of operating the water and wastewater utilities under the existing rate structures and provide alternatives based on a comprehensive cost of service study
- Analyze the impact of transitioning from the use of purchased potable water from the Detroit Water and Sewerage District ("DWSD") to the treatment of raw water from the Karegnondi Water Authority ("KWA").
- Review the City's water and wastewater operations in comparison to Best Management Practices criteria.

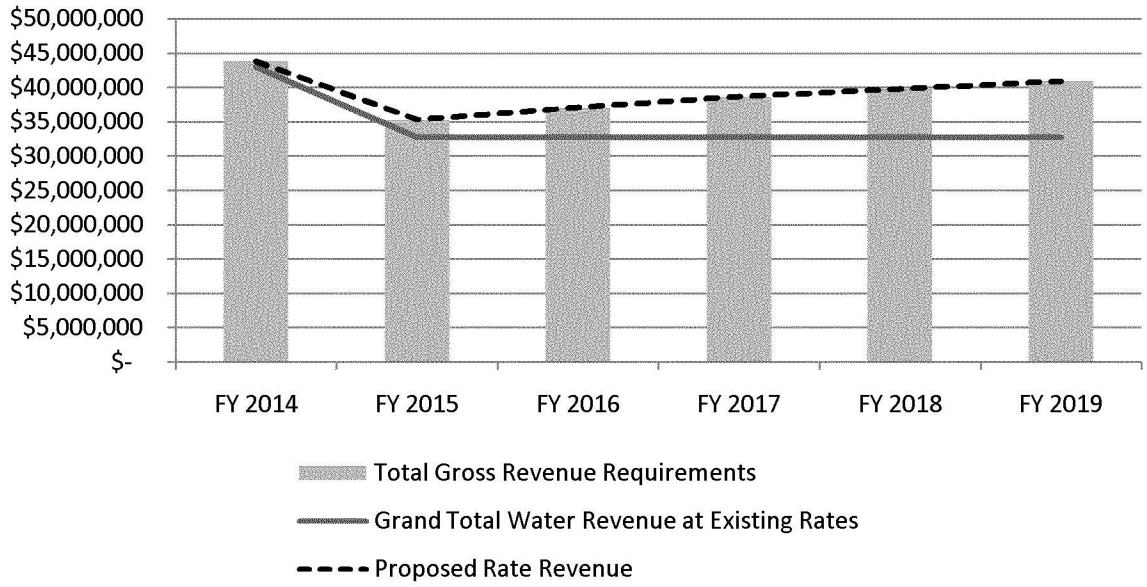
1.2 ADEQUACY OF EXISTING WATER AND WASTEWATER REVENUES

Charts ES-1 and 2 below summarize our conclusions with respect to the adequacy of water and wastewater revenue at existing rates. As the charts indicate, beginning in FY 2015, water and wastewater utility revenues are insufficient to recover each utility's revenue requirement. Key drivers of this disparity are:

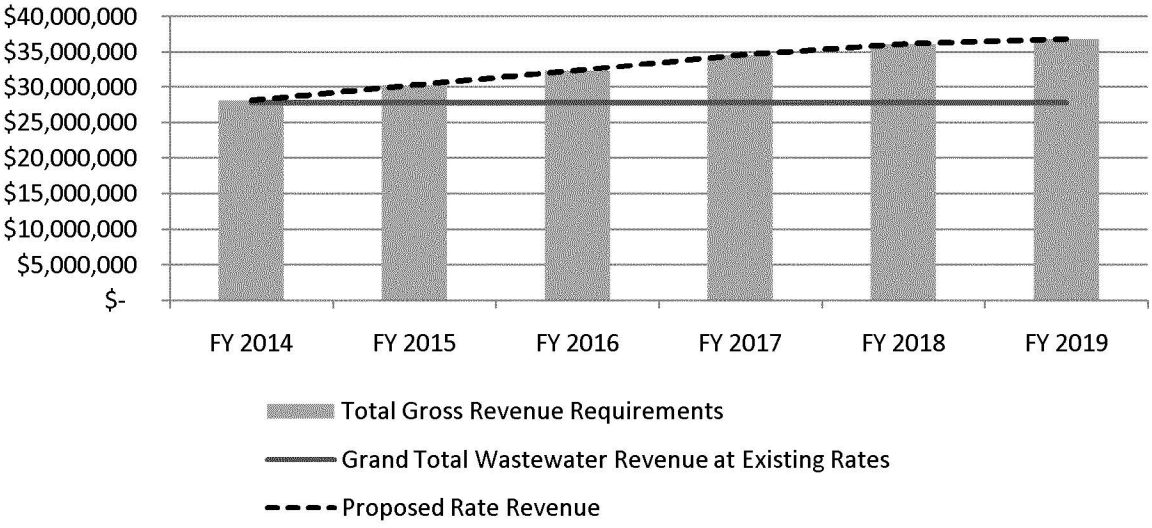
- A marked decrease in billed usage, the cause of which is currently being evaluated by RFC under a separate contract.
- A normal pattern of declining per customer usage for both utilities overall due to conservation, efficient appliances, etc.
- Increases in utility revenue requirements associated with the financial plans including operating cost inflation, capital improvements and policies which support the sound financial management of each utility in accordance with best management practices.

Consequently, the proposed increases in rate revenue are necessary to ensure each utility can adequately fund its operation and maintenance expenditures, make payments on existing debt service, provide funding for needed capital improvements and ensure adequate operating reserves.

ES-1: Water Utility Revenues at Existing Rates



ES-2: Wastewater Utility Revenues at Existing Rates



1.3 WATER AND WASTEWATER FINANCIAL PLANS

Tables ES-3 and ES-4 below summarize the proposed water and wastewater financial plans and rate revenue increases for the first 5 years of the forecast period.

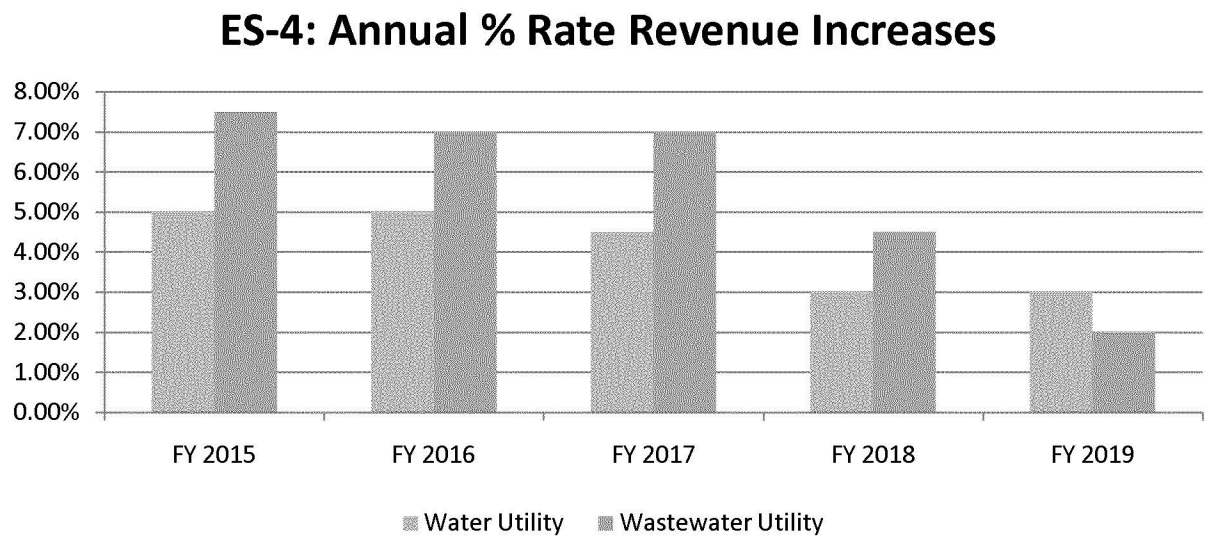
The financial plans and proposed increased in rate revenues are driven by the following factors:

- Inflationary increases in O&M expenditures for both utilities
- For the water utility:
    - Decreases in revenues associated with the cessation of service to Genesee County
    - Decreases in O&M expenditures associated with an elimination of DWSD water purchases
    - Increases in O&M expenditures associated with transitioning from back-up to primary operation of the Flint WTP
    - Increases in capital expenditures associated with improvements to the Flint WTP in preparation for the treatment of raw water from KWA
    - Increases in debt service associated with Flint's share of projected KWA debt service
- Necessary cash funded recapitalization of wastewater utility assets
- A build-up, for each utility, of operating reserves equivalent to 90 days of projected O&M expenditures and debt service payments, the minimum, according to financial management practices ("BMP").

ES-3: SUMMARY OF WATER AND WASTEWATER FINANCIAL PLANS

Water Utility	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019
REVENUES						
Grand Total Water Revenue at Existing Rates	$ 42,074,374	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575
Additional Revenue from Rate Increases	$ -	$ 1,638,100	$ 3,358,100	$ 4,983,900	$ 6,115,900	$ 7,282,300
Total Non-Rate Revenues	$ 000,000	$ 913,014	$ 931,644	$ 927,000	$ 930,000	$ 929,131
Add Transfers in from General Fund	$	$	$	$	$	
Total Rate and Non-Rate Revenues	$ 43,860,374	$ 35,313,989	$ 37,052,318	$ 38,673,761	$ 39,808,978	$ 40,974,006
GROSS REVENUE REQUIREMENTS						
O&M	$ 36,865,206	$ 21,483,441	$ 22,140,012	$ 23,316,857	$ 23,900,504	$ 24,705,148
Capital	$ 9,747,946	$ 11,742,821	$ 11,245,423	$ 16,148,146	$ 15,644,008	$ 16,143,195
Transfer to Operating Reserve	$ (2,752,778)	$ 2,087,727	$ 3,665,883	$ (791,542)	$ 161,466	$ 125,662
Total Gross Revenue Requirements	$ 43,860,374	$ 35,313,989	$ 37,052,318	$ 38,673,761	$ 39,806,978	$ 40,974,006
DEFICIT (EXISTING REVENUES - REVENUE REQ.)	$ -	$ (1,400,100)	$ (3,350,100)	$ (4,900,300)	$ (6,115,900)	$ (7,282,300)

Wastewater Utility	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019
REVENUES						
Grand Total Wastewater Revenue at Existing Rates	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374
Additional Revenue from Rate Increases	$	$ 2,053,300	$ 4,173,900	$ 6,410,100	$ 7,948,900	$ 8,853,000
Total Non-Rate Revenues	$ 395,872	$ 423,962	$ 431,948	$ 426,098	$ 422,741	$ 419,354
Add Transfers in from General Fund	$ -	$ -	$ -	$ -	$ -	
Total Rate and Non-Rate Revenues	$ 28,173,246	$ 30,254,637	$ 32,377,223	$ 34,613,572	$ 36,149,015	$ 37,049,728
GROSS REVENUE REQUIREMENTS						
O&M	$ 24,329,627	$ 23,053,392	$ 23,394,871	$ 24,081,988	$ 24,812,101	$ 25,557,113
Capital	$ 5,500,000	$ 7,000,000	$ 9,500,000	$ 9,500,000	$ 12,000,000	$ 8,000,000
Transfer to Operating Reserve	$ (1,656,381)	$ 200,845	$ (522,848)	$ 1,021,963	$ (663,086)	$ 3,322,615
Total Gross Revenue Requirements	$ 28,173,246	$ 30,254,237	$ 32,377,023	$ 34,613,952	$ 36,149,015	$ 36,879,728
DEFICIT (EXISTING REVENUES - REVENUE REQ.)	$ -	$ (2,053,300)	$ (4,173,900)	$ (6,410,100)	$ (7,948,900)	$ (8,853,000)



As indicated in the previous section, water and wastewater utility revenues at existing rates are not adequate to recover the projected costs each utility will incur over the forecast period. Consequently additional rate revenue will be needed to ensure adequate recovery of each utility's revenue requirements.

1.4 COST OF SERVICE STUDY AND WATER AND WASTEWATER RATES

Table ES-5 below summarizes the results of the water and wastewater cost of service studies. The customer classes included are those which are recognized in the City's existing customer information system ("CIS"). While the City does not currently have either a water or wastewater rate structure which recognizes these customer classes, rates by customer class have been calculated and are included as appendices A and B to this report. The totals for each customer class represent the contribution of that class to the overall costs of each utility. This is based on the allocation processes described in sections 4 and 5 of this report.

Given the transition from KWA to DWSD the City will not be making any rate structure changes at this time. It is our opinion that the current water and wastewater rate structures are reasonable. The declining block water rates generally recognizing the fact that higher volume customers (i.e. large commercial and industrial) contribute less to peak demand, and overall water utility costs. Additionally, the relatively high proportion of fixed charge revenue recovery provides a less climatically variable revenue stream, which given that the majority of the utility's costs are fixed, is entirely appropriate.

ES-5: SUMMARY OF COST OF SERVICE STUDY RESULTS

CUSTOMER CLASS	WATER	WASTEWATER
Allocated Cost of Service		
Total Inside City Residential COS	$ 18,345,672	$ 16,412,799
Total Inside City Commercial/Industrial COS	$ 15,263,704	$ 13,378,697
Total Inside City Lawn COS	$ 370,646	N/A
Total Inside City COS	$ 33,980,022	$ 29,791,496
Total Outside City Residential COS	$ 99,483	$ 2,382
Total Outside City Commercial/Industrial COS	$ 321,169	$ 66,796
Total Outside City Lawn COS	$ -	N/A
Total Outside City COS	$ 420,653	$ 69,178
Total System Cost of Service	$ 34,400,675	$ 29,860,674

Tables ES-6 and ES-7 summarize the projected fixed and volumetric rates for the first 5 years of the forecast period, given financial plans and rate revenue increases proposed above. For every dollar of rate revenue generated by each utility approximately $.66 is derived from volumetric charges and $.34 is derived from fixed charges.

It is typical for water and wastewater utilities to design fixed charges which recover, at a minimum, the costs of meter reading, billing and collection and customer service. Additionally, fixed charges may also relate to fixed investment in utility assets associated with providing service which is available at all times regardless of usage levels by City customers. These costs, known as readiness to serve costs, have also been incorporated into the water and wastewater fixed charges.

Volumetric rates recover the variable costs associated with operating the water and wastewater utilities. For the water utility variable costs are associated with water treatment, transmission and distribution, pumping, and storage and are driven primarily by the design requirements associated with peak water usage. For the wastewater utility variable costs are associated with wastewater treatment, collection, and pumping, and are driven by the wastewater volume and strength.

ES-6: SUMMARY OF WATER AND WASTEWATER VOLUMETRIC RATES

Water Volumetric Rates

CUSTOMER CLASS	CONSUMPTION BLOCK	UNITS	FY 2014 Existing Block Rates	Test-Year FY 2015 Proposed Block Rates	Forecast FY 2016 Proposed Block Rates	Forecast FY 2017 Proposed Block Rates	Forecast FY 2018 Proposed Block Rates	Forecast FY 2019 Proposed Block Rates
Annual % Increase in Rate Revenues			**0.00%**	**5.00%**	**5.00%**	**4.50%**	**3.00%**	**3.00%**
Total Inside City All Classes								
Inside City Block 1	0-35 CCF	($/CCF)	$ 7.52	$ 7.92	$ 8.32	$ 8.69	$ 8.95	$ 9.22
Inside City Block 2	36-2000 CCF	($/CCF)	$ 7.31	$ 7.62	$ 8.00	$ 8.36	$ 8.61	$ 8.87
Inside City Block 3	above 2000 CCF	($/CCF)	$ 5.79	$ 6.09	$ 6.40	$ 6.69	$ 6.89	$ 7.09
Total Outside City All Classes								
Outside City Block 1	0-35 CCF	($/CCF)	$ 11.26	$ 11.88	$ 12.48	$ 13.04	$ 13.43	$ 13.83
Outside City Block 2	36-2000 CCF	($/CCF)	$ 10.77	$ 11.42	$ 12.00	$ 12.54	$ 12.91	$ 13.30
Outside City Block 3	above 2000 CCF	($/CCF)	$ 8.68	$ 9.14	$ 9.60	$ 10.03	$ 10.33	$ 10.64

Wastewater Volumetric Rates

CUSTOMER CLASS	UNITS	FY 2014 Existing Rates	Test-Year FY 2015 Proposed Rates	Forecast FY 2016 Proposed Rates	Forecast FY 2017 Proposed Rates	Forecast FY 2018 Proposed Rates	Forecast FY 2019 Proposed Rates
Annual % Increase in Rate Revenues		**0.00%**	**7.50%**	**7.00%**	**7.00%**	**4.50%**	**2.00%**
Total Inside City All Classes	($/CCF)	$ 4.80	$ 5.17	$ 5.53	$ 5.92	$ 6.18	$ 6.31
Total Outside City All Classes	($/CCF)	$ 5.29	$ 5.68	$ 6.08	$ 6.51	$ 6.80	$ 6.94

ES-7: SUMMARY OF WATER AND WASTEWATER FIXED CHARGES

	WATER FIXED CHARGES						WASTEWATER FIXED CHARGES					
CUSTOMER CLASS	FY 2014 Existing Charge	Test Year FY 2015 Proposed Charge	Forecast FY 2016 Proposed Charge	Forecast FY 2017 Proposed Charge	Forecast FY 2018 Proposed Charge	Forecast FY 2019 Proposed Charge	FY 2014 Existing Charge	Test Year FY 2015 Proposed Charge	Forecast FY 2016 Proposed Charge	Forecast FY 2017 Proposed Charge	Forecast FY 2018 Proposed Charge	Forecast FY 2019 Proposed Charge
Inside City Residential												
5/8"	$ 21.78	$ 22.90	$ 24.05	$ 25.13	$ 25.89	$ 26.66	$ 32.00	$ 34.48	$ 36.90	$ 38.48	$ 41.26	$ 42.08
3/4"	$ 41.86	$ 44.03	$ 46.23	$ 48.31	$ 49.76	$ 51.25	$ 46.92	$ 50.55	$ 54.10	$ 57.89	$ 60.49	$ 61.70
1"	$ 55.28	$ 58.15	$ 61.05	$ 63.80	$ 65.72	$ 67.69	$ 66.34	$ 70.41	$ 75.30	$ 80.61	$ 84.24	$ 85.92
1-1/2"	$ 55.28	$ 58.15	$ 61.05	$ 63.80	$ 65.72	$ 67.69	$ 66.34	$ 70.41	$ 75.30	$ 80.61	$ 84.24	$ 85.92
2"	$ 55.28	$ 58.15	$ 61.05	$ 63.80	$ 65.72	$ 67.69	$ 66.34	$ 70.41	$ 75.30	$ 80.61	$ 84.24	$ 85.92
Inside City Commercial												
5/8"	$ 59.39	$ 55.79	$ 58.58	$ 61.21	$ 63.05	$ 64.94	$ 5.92	$ 55.90	$ 59.8	$ 64.00	$ 66.88	$ 68.21
3/4"	$ 61.36	$ 64.02	$ 67.22	$ 70.25	$ 72.35	$ 74.52	$ 6.43	$ 68.37	$ 74.20	$ 79.42	$ 83.00	$ 84.66
1"	$ 75.10	$ 78.48	$ 82.41	$ 86.11	$ 88.70	$ 91.36	$ 8.71	$ 91.20	$ 97.58	$ 104.41	$ 109.11	$ 111.29
1-1/2"	$ 107.76	$ 112.61	$ 118.23	$ 123.55	$ 127.26	$ 131.08	$ 13.84	$ 148.41	$ 158.79	$ 169.91	$ 177.55	$ 181.10
2"	$ 150.62	$ 157.40	$ 165.27	$ 172.71	$ 177.89	$ 183.22	$ 196.16	$ 211.19	$ 225.9	$ 241.79	$ 252.67	$ 257.73
3"	$ 297.45	$ 310.83	$ 326.37	$ 341.05	$ 351.28	$ 361.83	$ 438.06	$ 471.62	$ 504.6	$ 539.95	$ 564.26	$ 575.55
4"	$ 523.50	$ 547.05	$ 574.40	$ 600.25	$ 618.26	$ 636.81	$ 72.84	$ 777.14	$ 831.5	$ 889.75	$ 929.79	$ 948.39
6"	$ 1,029.43	$ 1,075.75	$ 1,129.54	$ 1,180.37	$ 1,215.78	$ 1,252.25	$ 1,459.56	$ 1,571.80	$ 1,681.82	$ 1,799.55	$ 1,880.53	$ 1,918.14
8"	$ 1,492.88	$ 1,560.05	$ 1,638.05	$ 1,711.77	$ 1,763.12	$ 1,816.01	$ 2,148.21	$ 2,312.79	$ 2,474.68	$ 2,647.91	$ 2,767.07	$ 2,822.41
10"	$ 2,060.75	$ 2,153.48	$ 2,261.16	$ 2,362.91	$ 2,433.80	$ 2,506.81	$ 2,918.39	$ 3,141.97	$ 3,361.9	$ 3,597.24	$ 3,759.12	$ 3,834.30
12"	$ 2,499.12	$ 2,605.31	$ 2,735.57	$ 2,858.67	$ 2,944.43	$ 3,032.77	$ 3,426.29	$ 3,688.72	$ 3,946.90	$ 4,223.22	$ 4,413.26	$ 4,501.52
16"	$ 3,102.64	$ 3,242.25	$ 3,404.36	$ 3,557.55	$ 3,664.28	$ 3,774.21	$ 4,520.95	$ 4,870.53	$ 5,211.4	$ 5,576.27	$ 5,827.20	$ 5,943.74
20"	$ 3,351.18	$ 3,501.98	$ 3,677.08	$ 3,842.54	$ 3,957.82	$ 4,076.55	$ 5,336.87	$ 5,734.95	$ 6,136.4	$ 6,566.95	$ 6,861.42	$ 6,998.65
Outside City Residential												
5/8"	$ 32.68	$ 34.17	$ 35.87	$ 37.49	$ 38.61	$ 39.77	$ 4.01	$ 44.19	$ 47.28	$ 50.59	$ 52.87	$ 53.93
3/4"	$ 62.71	$ 65.56	$ 68.85	$ 72.01	$ 74.54	$ 76.78	$ 95.01	$ 60.36	$ 64.6	$ 69.09	$ 72.20	$ 73.64
1"	$ 82.79	$ 87.08	$ 91.43	$ 95.65	$ 98.42	$ 101.37	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23
1-1/2"	$ 82.79	$ 87.08	$ 91.43	$ 95.65	$ 98.42	$ 101.37	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23
2"	$ 82.79	$ 87.08	$ 91.43	$ 95.65	$ 98.42	$ 101.37	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23
Outside City Commercial												
5/8"	$ 80.13	$ 83.74	$ 87.99	$ 91.88	$ 94.64	$ 97.48	$ 58.12	$ 62.57	$ 66.95	$ 71.64	$ 74.85	$ 76.36
3/4"	$ 91.72	$ 95.84	$ 100.63	$ 105.16	$ 108.32	$ 111.57	$ 70.62	$ 79.26	$ 84.8	$ 90.75	$ 94.83	$ 96.73
1"	$ 112.67	$ 117.74	$ 123.63	$ 129.19	$ 133.07	$ 137.06	$ 98.05	$ 105.55	$ 112.95	$ 120.86	$ 126.30	$ 128.82
1-1/2"	$ 161.79	$ 169.05	$ 177.52	$ 185.51	$ 191.07	$ 196.80	$ 164.80	$ 177.43	$ 189.86	$ 203.14	$ 212.28	$ 216.52
2"	$ 226.09	$ 236.26	$ 248.07	$ 259.24	$ 267.01	$ 275.02	$ 232.43	$ 250.24	$ 267.76	$ 286.50	$ 299.39	$ 305.38
3"	$ 448.47	$ 468.65	$ 492.08	$ 514.23	$ 529.65	$ 545.54	$ 522.87	$ 562.91	$ 602.31	$ 644.49	$ 673.51	$ 686.97
4"	$ 786.37	$ 821.71	$ 861.74	$ 900.52	$ 927.53	$ 955.36	$ 866.01	$ 953.89	$ 1,020.66	$ 1,092.10	$ 1,141.25	$ 1,164.07
6"	$ 1,540.87	$ 1,610.34	$ 1,690.00	$ 1,770.23	$ 1,823.34	$ 1,878.04	$ 1,770.13	$ 1,905.74	$ 2,039.1	$ 2,181.88	$ 2,280.07	$ 2,325.67
8"	$ 2,239.47	$ 2,340.24	$ 2,457.26	$ 2,567.83	$ 2,644.87	$ 2,724.21	$ 2,646.52	$ 2,849.27	$ 3,048.72	$ 3,262.13	$ 3,408.59	$ 3,477.11
10"	$ 3,107.46	$ 3,247.30	$ 3,409.67	$ 3,563.10	$ 3,670.00	$ 3,780.10	$ 3,522.54	$ 3,792.41	$ 4,057.88	$ 4,341.93	$ 4,537.31	$ 4,628.06
12"	$ 3,739.51	$ 3,907.77	$ 4,103.16	$ 4,287.80	$ 4,416.44	$ 4,548.93	$ 4,132.57	$ 4,449.17	$ 4,760.62	$ 5,093.85	$ 5,323.08	$ 5,429.54
16"	$ 4,653.87	$ 4,863.28	$ 5,105.44	$ 5,336.23	$ 5,496.32	$ 5,661.21	$ 5,491.91	$ 5,919.11	$ 6,333.46	$ 6,776.79	$ 7,081.75	$ 7,223.38
20"	$ 5,463.82	$ 5,709.67	$ 5,995.16	$ 6,264.94	$ 6,452.89	$ 6,646.48	$ 6,532.02	$ 7,032.44	$ 7,524.72	$ 8,051.45	$ 8,413.76	$ 8,582.04

1.5 TRANSITION FROM DWSD TO KWA

A key aspect of this study involved analyzing the impact of the anticipated April 1, 2014 transition from the Detroit Water and Sewerage District ("DWSD") to the Karegnondi Water Authority ("KWA"). The expectation is that the transition will strengthen the water utility's financial position going forward, by affording the City greater control over its operating and capital costs. As part of this engagement the City asked RFC to estimate the potential savings to a typical Flint customer as a result of transitioning from DWSD to the KWA.

A summary of the potential savings, based on an alternative water financial planning scenario is summarized in Table ES-8 below. For example, a City customer using 5 CCF per month would see a combined monthly bill of approximately $122.83 under the KWA. This is based on a 5% water rate increase over existing rates. That same customer, should the City continue receiving service from DWSD, is estimated to have a bill of approximately $127.70. This represents estimated 13% water rate increase over existing rates. Consequently, the savings to the typical City is approximately $4.87 per month, or $58.44 per year. Finally, note that the cumulative water rate increase over the next 5 years is estimated to be 18% under the KWA and 41% under DWSD.

ES-8: POTENTIAL RESIDENTIAL BILL SAVINGS (KWA VS. DWSD)

Cumulative Increase KWA (Water Rates)	**0%**	**5%**	**10%**	**15%**	**19%**	**22%**
Additional With DWSD (Water Rates)	**0%**	**9%**	**19%**	**20%**	**21%**	**21%**
Total Under DWSD	**0%**	**14%**	**29%**	**35%**	**39%**	**44%**

RATE IMPACT 5/8" Customer	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Monthly Usage (CCF)						
1	$ 66.10	$ 70.48	$ 74.79	$ 79.22	$ 82.28	$ 84.27
2	$ 78.41	$ 83.57	$ 88.64	$ 93.83	$ 97.41	$ 99.80
3	$ 90.73	$ 96.66	$102.49	$108.44	$112.55	$115.33
4	$103.05	$109.74	$116.33	$123.05	$127.68	$130.85
5	$115.37	$122.83	$130.18	$137.65	$142.82	$146.38
6	$127.69	$135.92	$144.03	$152.26	$157.95	$161.91
7	$140.00	$149.01	$157.88	$166.87	$173.09	$177.44
8	$152.32	$162.10	$171.72	$181.48	$188.23	$192.97
9	$164.64	$175.19	$185.57	$196.09	$203.36	$208.49
10	$176.96	$188.28	$199.42	$210.70	$218.50	$224.02

ESTIMATED MONTHLY SAVINGS	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Monthly Usage (CCF)						
1	$ -	$ (2.42)	$ (5.37)	$ (5.80)	$ (5.98)	$ (6.15)
2	$ -	$ (3.04)	$ (6.74)	$ (7.28)	$ (7.50)	$ (7.72)
3	$ -	$ (3.65)	$ (8.11)	$ (8.76)	$ (9.02)	$ (9.29)
4	$ -	$ (4.26)	$ (9.47)	$ (10.23)	$ (10.54)	$ (10.86)
5	$ -	$ (4.87)	$ (10.84)	$ (11.71)	$ (12.06)	$ (12.42)
6	$ -	$ (5.48)	$ (12.21)	$ (13.19)	$ (13.58)	$ (13.99)
7	$ -	$ (6.09)	$ (13.58)	$ (14.67)	$ (15.11)	$ (15.56)
8	$ -	$ (6.71)	$ (14.94)	$ (16.14)	$ (16.63)	$ (17.13)
9	$ -	$ (7.32)	$ (16.31)	$ (17.62)	$ (18.15)	$ (18.69)
10	$ -	$ (7.93)	$ (17.68)	$ (19.10)	$ (19.67)	$ (20.26)

1.6 WATER AND WASTEWATER UTILITY OPERATIONS AND BEST MANAGEMENT PRACTICES

We reviewed the City's water and wastewater utility performance in relation to Best Management Practices ("BMP") that have been published by Fitch Ratings ("Fitch"). These criteria are used by Fitch when reviewing the performance of a utility as part of the bond rating process. Table ES-9 below summarizes our assessment of the City's water and wastewater utility operations with respect to BMP. The City's operations generally comport with BMP. The City is working to improve consistency in four areas: first, as mentioned above, the financial plans build-up to the minimum recommended 90 operating reserve and should achieve this reserve, all else equal, in the next 5 years. Second, the City is working with RFC, under a separate contract, to identify sources of lost water and wastewater revenue to improve the City's revenue collections, and reduce the cost of utility service theft to paying customers. Third, the City is currently determining arrangements whereby the general fund can repay its obligations to the water and wastewater utilities, ensuring the water and wastewater funds are not subsidizing general government operations going forward. Finally, the transition to KWA will allow the City greater control over its operating and capital costs, and as mentioned above, should result in more affordable rates than the alternative.

ES-9: FITCH BEST MANAGEMENT PRACTICES

Criteria	Consistent	Improving	Inconsistent
Financial Profile			
Financial Forecasting	✖		
Debt Service Coverage and Operating Reserves		✖	
Financial Reporting and Monitoring	✖		
Limited Exposure to Growth Revenues	✖		
Timely Collection of Payment and Penalty Enforcment		✖	
Political Willingness to Adjust Rates	✖		
Limited Exposure to General Govt. Finances		✖	
GAAP Compliance	✖		
Affordability		✖	
Debt Profile			
Prioritized Capital Improvement Plans	✖		
Debt Policy	✖		
Hedge Agreements			
Operating Profile			
Management Experience	✖		
Use of Professional Engineers	✖		
Consultation with Local/Regional Growth Planners	✖		

2. INTRODUCTION AND STUDY OBJECTIVES

2.1 INTRODUCTION

In November of 2013, the City of Flint ("City") engaged Raftelis Financial Consultants ("RFC") to perform water and wastewater utility rate studies. The need for engagement was precipitated by the City's transition from the use of purchased water from the Detroit Water and Sewerage District ("DWSD") to participation in the Karegnondi Water Authority ("KWA") on April 1, 2014. Following the transition, the City will treat raw water from the KWA at its existing water treatment plant, which is currently undergoing the improvements necessary to become the primary source of treated water for the City of Flint. The expectation is that the transition will strengthen the water utility's financial position going forward, affording the City greater control over its operating and capital costs as a result.

From a financial perspective, the following are a few notable aspects of the transition:

- Water Operation and Maintenance ("O&M") expenditures are projected to decrease significantly as the cost of purchasing water from DWSD ceases as of FY 2015,
- Water Capital costs are projected to increase as the City begins paying its share of the Karegnondi Water Authority's debt service and incurs the cost of the necessary water treatment plant improvements.
- Water utility revenues will decrease as the City's wholesale customer, Genesee County ("County"), will no longer be receiving water service from the City as a result of the transition
- Projected water increases under the KWA are projected to be lower than they would have been, had the City continued to purchase water from DWSD
- City of Flint residential customer water bills are projected to be lower under the KWA than if the City had continued to purchase water from DWSD (see Table 1 below).

TABLE 1: ESTIMATED RATE INCREASES (KWA VS. DWSD)

CUMULATIVE % RATE REVENUE INCREASE	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
KWA	0%	5%	10%	15%	19%	22%
DWSD	0%	14%	29%	35%	39%	44%

ESTIMATED MONTHLY SAVINGS	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Monthly Usage (CCF)						
1	$ -	$ (2.42)	$ (5.37)	$ (5.80)	$ (5.98)	$ (6.15)
2	$ -	$ (3.04)	$ (6.74)	$ (7.28)	$ (7.50)	$ (7.72)
3	$ -	$ (3.65)	$ (8.11)	$ (8.76)	$ (9.02)	$ (9.29)
4	$ -	$ (4.26)	$ (9.47)	$ (10.23)	$ (10.54)	$ (10.86)
5	$ -	$ (4.87)	$ (10.84)	$ (11.71)	$ (12.06)	$ (12.42)
6	$ -	$ (5.48)	$ (12.21)	$ (13.19)	$ (13.58)	$ (13.99)
7	$ -	$ (6.09)	$ (13.58)	$ (14.67)	$ (15.11)	$ (15.56)
8	$ -	$ (6.71)	$ (14.94)	$ (16.14)	$ (16.63)	$ (17.13)
9	$ -	$ (7.32)	$ (16.31)	$ (17.62)	$ (18.15)	$ (18.69)
10	$ -	$ (7.93)	$ (17.68)	$ (19.10)	$ (19.67)	$ (20.26)

2.2 RATE STUDY OBJECTIVES

The objectives of this study are as follows:

- Evaluate the adequacy of existing water and wastewater revenues to meet the projected revenue requirements
- Develop comprehensive water and wastewater financial plans based on sound financial management practices for a 10 year forecast period
- Determine water and wastewater rates which adequately recover the cost of operating the water and wastewater utilities under the existing rate structures and provide alternatives based on a comprehensive cost of service study
- Evaluate the City's current financial position and adjust the comprehensive financial plans for both the mid-year transition to the KWA and going forward.

3. WATER AND WASTEWATER UTILITY FINANCIAL PLANS

3.1 THE FINANCIAL PLANNING PROCESS

The general objective of the financial planning process is to arrive at the level of water and wastewater rate revenue required to ensure the financial sustainability of each utility on a going forward basis. This revenue requirement is then distributed to each customer class as part of the cost of service study.

For this study financial plans were developed for the current fiscal year, the test year and a ten-year forecast period. The current year is typically the year in which the study occurs, in this case fiscal year 2014 ("FY 2014"), or the year ending July 30, 2014. For the current year the financial plans represent an estimate, for each utility, of year-end financial position.

This serves as the basis for the test year financial plan. For this study, the test year is the following fiscal year, FY 2015. While the current year serves as an estimate of each utility's current financial position, the test year represents a projection of utility revenues, expenditures and operating reserve levels. The ten-year forecast period allows the City to evaluate trends over time and evaluate the impact of challenges that occur beyond the test year. For the purposes of this study separate financial plans were developed for each utility to ensure that each would be self-sustaining.

The following steps are necessary to arrive at the test year revenue requirement for each utility:

- Forecast customer units of service and revenue at existing water and wastewater rates
- Forecast operation and maintenance expenditures ("O&M") for each utility
- Forecast capital expenditures, including the payment of existing water and wastewater debt service and the financing of planned capital improvements
- Develop detailed cash flow forecasts summarizing planned O&M and capital expenditures, recommended rate revenue increases and operating reserve levels

3.2 WATER UTILITY FINANCIAL PLAN

3.2.1 Forecast Water Units of Service and Revenue at Existing Rates

Water Utility Rates

The City recovers the cost of operating the water utility via volumetric rates (rates based on the amount of water used) and fixed monthly service charges (a charge per customer bill). The City's existing water volumetric charge is a declining block rate, or a rate that decreases on a per unit basis as the amount of water consumed increases. The existing water volumetric rate structure is shown in Table 2 below:

TABLE 2: EXISTING WATER VOLUMETRIC RATES

CUSTOMER CLASS	CONSUMPTION BLOCK	UNITS	FY 2014 Existing Block Rates
Total Inside City All Classes			
Inside City Block 1	0-35 CCF	($/CCF)	$ 7.52
Inside City Block 2	36-2000 CCF	($/CCF)	$ 7.31
Inside City Block 3	above 2000 CCF	($/CCF)	$ 5.79
Total Outside City All Classes			
Outside City Block 1	0-35 CCF	($/CCF)	$ 11.26
Outside City Block 2	36-2000 CCF	($/CCF)	$ 10.77
Outside City Block 3	above 2000 CCF	($/CCF)	$ 8.68

A distinction is made between customers residing within in the City of Flint, and those who receive City water service, but do not reside within the City. As Table 2 indicates, outside city volumetric rates are approximately 150% of inside city volumetric rates. This is a common policy for municipal water utilities and recognizes inside city customers as "owners" of the utility, who should be compensated for the risk of investing in and maintaining their utility system.

In addition to the volumetric rates, the existing water rate structure includes a fixed service charge which varies by customer water meter size. The rates are charged per customer bill and are shown in Table 3 on the following page.

TABLE 3: EXISTING WATER FIXED CHARGES

CUSTOMER CLASS	FY 2014 Proposed Fixed Charge
Inside City Residential Customers	
5/8"	$ 21.78
3/4"	$ 41.86
1"	$ 55.20
1-1/2"	$ 55.28
2"	$ 55.28
Inside City Commercial/Industrial Customers	
5/8"	$ 53.39
3/4"	$ 81.26
1"	$ 75.10
1-1/2"	$ 107.76
2"	$ 150.62
3"	$ 297.45
4"	$ 523.50
6"	$ 1,029.43
8"	$ 1,492.88
10"	$ 2,080.75
12"	$ 2,493.12
16"	$ 3,102.64
20"	$ 3,351.18
Outside City Residential Customers	
5/8"	$ 32.48
3/4"	$ 62.71
1"	$ 82.79
1-1/2"	$ 82.79
2"	$ 82.79
Outside City Commercial/Industrial Customers	
5/8"	$ 80.13
3/4"	$ 81.72
1"	$ 112.67
1-1/2"	$ 161.79
2"	$ 226.09
3"	$ 448.47
4"	$ 785.37
6"	$ 1,543.87
8"	$ 2,239.47
10"	$ 3,107.48
12"	$ 3,739.51
16"	$ 4,653.87
20"	$ 5,453.82

Most Flint residential customers have a 5/8" meter and currently pay the $21.78 fixed monthly service charge. For the monthly fixed charge the same distinction is made between inside and outside city customers, with the outside city charge set at approximately 150% of the inside city

charge. Additionally, the current fixed charge structure further distinguishes between residential commercial customers.

In addition to the retail rates discussed above, the City currently serves a wholesale water customer, Genesee County. Genesee County pays a commodity charge of $346,863, a fixed monthly service charge of $114,000 and a volumetric rate of $1.30 per CCF. As mentioned above, as of April 1, 2014, the County will no longer be a customer of the City.

Forecast Water Units of Service

In order to forecast the level of revenue under existing water rates, the number of water accounts at each meter size and the level of water consumption in each consumption block must be estimated for the forecast period.

The number of accounts at each meter size was determined by dividing the number of annual bills at each meter size by the 12 monthly billing periods. The number of historical and forecast water utility customer accounts, by meter size, is indicated in Tables 4 and 5 on the following two pages. Note that the historical data appear to indicate a 14% increase in inside city accounts and a 27% increase in outside city accounts from FY 2012 to FY 2013. This increase in accounts does not appear to have been sustained into FY 2014. The City has indicated that water and wastewater billings have decreased approximately 12% from FY 2013 to FY 2014 year to date. Given this change and for the sake of developing a conservative estimate we have adjusted the forecast level of water accounts to 13% below their FY 2013 level. As no significant growth in the City's customer base is expected, no growth in water utility accounts has been projected over the forecast period.

TABLE 4: FORECAST INSIDE CITY WATER ACCOUNTS

Customer Class	Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Inside City Residential														
5/8"	25,003	28,480	24,777	24,777	24,777	24,777	24,777	24,777	24,777	24,777	24,777	24,777	24,777	24,777
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	272	338	294	294	294	294	294	294	294	294	294	294	294	294
1-1/2"	26	39	29	29	29	29	29	29	29	29	29	29	29	29
2"	9	11	9	9	9	9	9	9	9	9	9	9	9	9
Unmetered			-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Residential Remote	25,310	28,862	25,110	25,110	25,110	25,110	25,110	25,110	25,110	25,110	25,110	25,110	25,110	25,110
Inside City Commercial/Industrial														
5/8"	362	409	365	365	365	365	365	365	365	365	365	365	365	365
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	245	281	244	244	244	244	244	244	244	244	244	244	244	244
1-1/2"	250	279	242	242	242	242	242	242	242	242	242	242	242	242
2"	250	286	249	249	249	249	249	249	249	249	249	249	249	249
3"	84	95	83	83	83	83	83	83	83	83	83	83	83	83
4"	59	63	55	55	55	55	55	55	55	55	55	55	55	55
6"	36	41	35	35	35	35	35	35	35	35	35	35	35	35
8"	2	2	2	2	2	2	2	2	2	2	2	2	2	2
10"			-	-	-	-	-	-	-	-	-	-	-	-
12"			-	-	-	-	-	-	-	-	-	-	-	-
16"			-	-	-	-	-	-	-	-	-	-	-	-
20"			-	-	-	-	-	-	-	-	-	-	-	-
Unmetered			-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Commercial/Industrial	1,307	1,457	1,288	1,288	1,288	1,288	1,288	1,288	1,288	1,288	1,288	1,288	1,288	1,288
Inside City Lawn														
5/8"	28	35	30	30	30	30	30	30	30	30	30	30	30	30
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	11	13	11	11	11	11	11	11	11	11	11	11	11	11
1-1/2"	4	5	4	4	4	4	4	4	4	4	4	4	4	4
2"	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3"		-	-	-	-	-	-	-	-	-	-	-	-	-
4"		-	-	-	-	-	-	-	-	-	-	-	-	-
6"		-	-	-	-	-	-	-	-	-	-	-	-	-
8"		-	-	-	-	-	-	-	-	-	-	-	-	-
10"		-	-	-	-	-	-	-	-	-	-	-	-	-
12"		-	-	-	-	-	-	-	-	-	-	-	-	-
16"		-	-	-	-	-	-	-	-	-	-	-	-	-
20"		-	-	-	-	-	-	-	-	-	-	-	-	-
Unmetered		-	-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Lawn	43	53	46	46	46	46	46	46	46	46	46	46	46	46
Total Inside City Accounts	26,661	30,372	26,423	26,423	26,423	26,423	26,423	26,423	26,423	26,423	26,423	26,423	26,423	26,423
%Change		14%	-13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

TABLE 5: FORECAST OUTSIDE CITY WATER ACCOUNTS

Customer Class	Historical FY 2012	Historical FY 2013	Budget Yr FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Outside City Residential														
"0		0	-	-	-	-	-	-	-	-	-	-	-	-
"0		0	-	-	-	-	-	-	-	-	-	-	-	-
5/8"	108	114	123	123	123	123	123	123	123	123	123	123	123	123
3/4"		0	-	-	-	-	-	-	-	-	-	-	-	-
"	2	3	3	3	3	3	3	3	3	3	3	3	3	3
1-1/2"		0	-	-	-	-	-	-	-	-	-	-	-	-
2"		0	-	-	-	-	-	-	-	-	-	-	-	-
Immetered		0	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Residential Remote	110	114	125	125	125	125	125	125	125	125	125	125	125	125
Outside City Commercial/Industrial														
"0		-	-	-	-	-	-	-	-	-	-	-	-	-
"0		-	-	-	-	-	-	-	-	-	-	-	-	-
5/8"	14	16	13	13	13	13	13	13	13	13	13	13	13	13
3/4"		-	-	-	-	-	-	-	-	-	-	-	-	-
"	10	12	11	11	11	11	11	11	11	11	11	11	11	11
1-1/2"	3	1	3	3	3	3	3	3	3	3	3	3	3	3
2"	6	7	6	6	6	6	6	6	6	6	6	6	6	6
3"		-	-	-	-	-	-	-	-	-	-	-	-	-
4"	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6"	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8"		-	-	-	-	-	-	-	-	-	-	-	-	-
10"		-	-	-	-	-	-	-	-	-	-	-	-	-
12"		-	-	-	-	-	-	-	-	-	-	-	-	-
16"		-	-	-	-	-	-	-	-	-	-	-	-	-
20"		-	-	-	-	-	-	-	-	-	-	-	-	-
Immetered		-	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Commercial/Industrial	35	40	35	35	35	35	35	35	35	35	35	35	35	35
Outside City Lawn														
"0	0	0	-	-	-	-	-	-	-	-	-	-	-	-
"0	0	0	-	-	-	-	-	-	-	-	-	-	-	-
5/8"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
3/4"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
1-1/2"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
2"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
3"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
4"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
6"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
8"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
10"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
12"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
16"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
20"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Immetered	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Lawn	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Accounts	145	154	160	160	160	160	160	160	160	160	160	160	160	160
%Change		27%	-13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

In addition to forecasting the number of accounts by meter size, the level of water consumption in each consumption block must be estimated for the forecast period. The historical and forecast level of water consumption by customer class and block is indicated in Tables 6 and 7 on the following two pages.

Note that—consistent with the significant increase in inside city water accounts in FY 2013—inside city water consumption has increased significantly in FY 2013 (18%). Given the uncertainty surrounding the increase in billed consumption in FY 2013, and the subsequent decrease in billed revenues in FY 2014, we have forecast retail consumption at 6% below FY 2013 levels for FY 2014, FY 2015 and the remainder of the ten year forecast period.

As noted above, the City anticipates discontinuing DWSD water service as of April 1, 2014. At that point Genesee County will no longer be a wholesale customer of the City. Therefore the forecast of the County's consumption has been adjusted to account for the final 3 months of FY 2014 (i.e. April, May and June) during which the City will not be providing water service to the County.

TABLE 6: FORECAST INSIDE CITY WATER CONSUMPTION

Customer Class		Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Inside City Residential															
Inside City Block 1	0-35	1,540,554	1,728,895	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913
Inside City Block 2	36-2000	74,689	91,254	88,599	88,599	88,599	88,599	88,599	88,599	88,599	88,599	88,599	88,599	88,599	88,599
Inside City Block 3	above 2000		30,003	31,023	31,023	31,023	31,023	31,023	31,023	31,023	31,023	31,023	31,023	31,023	31,023
Total Inside City Residential		1,615,240	1,850,152	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535
Inside City Commercial/Industrial															
Inside City Block 1	0-35	100,192	118,832	111,702	111,702	111,702	111,702	111,702	111,702	111,702	111,702	111,702	111,702	111,702	111,702
Inside City Block 2	36-2000	802,340	915,899	860,757	860,757	860,757	860,757	860,757	860,757	860,757	860,757	860,757	860,757	860,757	860,757
Inside City Block 3	above 2000	368,899	544,447	511,780	511,780	511,780	511,780	511,780	511,780	511,780	511,780	511,780	511,780	511,780	511,780
Total Inside City Commercial/Industrial		1,290,311	1,578,978	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239
Inside City Lawn															
Inside City Block 1	0-35	4,153	5,856	5,504	5,504	5,504	5,504	5,504	5,504	5,504	5,504	5,504	5,504	5,504	5,504
Inside City Block 2	36-2000	5,065	7,534	7,082	7,082	7,082	7,082	7,082	7,082	7,082	7,082	7,082	7,082	7,082	7,082
Inside City Block 3	above 2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Lawn		10,118.00	13,389.00	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86
Total Inside City All Classes															
Inside City Block 1	0-35	1,651,899	1,854,782	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119
Inside City Block 2	36-2000	882,094	1,017,687	956,438	956,438	956,438	956,438	956,438	956,438	956,438	956,438	956,438	956,438	956,438	956,438
Inside City Block 3	above 2000	370,009	577,450	542,000	542,000	542,000	542,000	542,000	542,000	542,000	542,000	542,000	542,000	542,000	542,000
Grand Total Inside City Water Consumption		2,915,872	3,449,919	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360
			18%	-6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

TABLE 7: FORECAST OUTSIDE CITY WATER CONSUMPTION

Customer Class	Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY2016	Forecast FY 2017	Forecast FY2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Outside City Residential														
Outside City Block 1 0-35	5,952	7880	7,229	7,229	7,229	7,229	7,229	7,229	7,229	7,229	7,229	7,229	7,229	7,229
Outside City Block 2 36-2000	168	940	884	884	884	884	884	884	884	884	884	884	884	884
Outside City Block 3 above 2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Residential	6,120	8630	8,112	8,112	8,112	8,112	8,112	8,112	8,112	8,112	8,112	8,112	8,112	8,112
Outside City Commercial/Industrial														
Outside City Block 1 0-35	3,262	3909	3,298	3,298	3,298	3,298	3,298	3,298	3,298	3,298	3,298	3,298	3,298	3,298
Outside City Block 2 36-2000	2,888	10,220	9,607	9,607	9,607	9,607	9,607	9,607	9,607	9,607	9,607	9,607	9,607	9,607
Outside City Block 3 above 2000	36,388	14,214	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361
Total Outside City Commercial/Industrial	42,538	27,943	26,266	26,266	26,266	26,266	26,266	26,266	26,266	26,266	26,266	26,266	26,266	26,266
Outside City Lawn														
Outside City Block 1 0-35	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Outside City Block 2 36-2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Outside City Block 3 above 2000														
Total Outside City Lawn	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City All Classes														
Outside City Block 1 0-35	9,174	11,199	10,527	10,527	10,527	10,527	10,527	10,527	10,527	10,527	10,527	10,527	10,527	10,527
Outside City Block 2 36-2000	3,056	11,160	10,490	10,490	10,490	10,490	10,490	10,490	10,490	10,490	10,490	10,490	10,490	10,490
Outside City Block 3 above 2000	36,388	14,214	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361
Grand Total Inside City Water Consumption	48,618	36,573	34,379	34,379	34,379	34,379	34,379	34,379	34,379	34,379	34,379	34,379	34,379	34,379
TOTAL RETAIL														
Total Block 1	1,633,013	1,865,681	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646
Total Block 2	886,080	1,028,647	966,028	966,028	966,028	966,028	966,028	966,028	966,028	966,028	966,028	966,028	966,028	966,028
Total Block 3	445,277	591,664	556,164	556,164	556,164	556,164	556,164	556,164	556,164	556,164	556,164	556,164	556,164	556,164
Grand Total Retail Consumption	2,964,370	3,486,842	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738
		18%	-6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
WHOLESALE														
Genesee County Wholesale Rate														
Genesee County Consumption	6,121,530	6,214,790	4,661,055	-	-	-	-	-	-	-	-	-	-	-
GRAND TOTAL WATER CONSUMPTION	9,086,900	9,700,632	7,937,793	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738
		7%	-18%	-59%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Forecast Water Revenue at Existing Rates

Water utility revenue at existing rates is the sum of the volumetric and fixed charge revenue. Fixed charge revenue at existing rates was determined by multiplying the number of forecast accounts at each meter size, by the existing rate for that size and again by 12, for each of the monthly bills. Volumetric revenue was determined by multiplying the level of consumption in each consumption block, by the existing rate for that block. Table 8 on the following page summarizes the level of water revenue at existing water rates.

The total level of water revenue at existing rates in FY 2014 is forecast to be approximately $43 Million. Of this, around 70% is derived from the volumetric rates and 30% is associated with the fixed monthly service charges. In FY 2015, the level of revenue at existing rates is forecast to decline to approximately $32 Million. This change can be attributed to the loss of Flint's existing wholesale customer Genesee County, which will occur as a result of the City's discontinuing DWSD water service. On a going forward basis, the level of revenues at existing water rates would remain at 32 Million assuming consumption and account growth remain flat and the City makes no adjustments to water rates.

TABLE 8: FORECAST WATER REVENUE AT FY 2014 RATES

SUMMARY OF FORECAST WATER VOLUME REVENUE AT EXISTING RATES												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
GRAND TOTAL SYSTEM CONSUMPTION REVENUE	$ 29,661,666	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630
GRAND TOTAL SYSTEM FIXED CHARGE REVENUE	$ 10,332,708	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942
GRAND TOTAL WATER REVENUE AT EXISTING RATES	$ 42,994,374	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575

SUMMARY OF METERED WATER REVENUE												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
TOTAL RETAIL CONSUMPTION REVENUE												
Total Inside City Residential	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886
Total Inside City Commercial/Industrial	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630
Total Inside City Farm	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146
	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630
WHOLESALE CONSUMPTION REVENUE												
Genesee County Consumption	$ 6,074,036	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GRAND TOTAL SYSTEM CONSUMPTION REVENUE	$ 29,661,666	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630

SUMMARY OF FIXED CHARGE WATER REVENUE												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
TOTAL RETAIL FIXED CHARGE REVENUE												
Total Inside City Residential	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537
Total Inside City Commercial/Industrial	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286
Total Inside City Farm	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119
	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942
WHOLESALE FIXED CHARGE REVENUE												
Total Genesee County fixed Charge	$ 1,147,767	$	$	$	$	$	$	$	$	$	$	$
GRAND TOTAL SYSTEM FIXED CHARGE REVENUE	$ 10,322,708	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942

3.2.2 Forecast of Water Operation and Maintenance Expenditures

Water O&M Inflation Rates

The budgets provided by the City are the basis for the forecast of water utility O&M expenditures. Given that the transition from DWSD to KWA involves significant shifts in budgetary expenditures on a relatively detailed level, the City provided uninflated estimates of budgeted O&M expenditures for FY 2014 through FY 2017. To forecast the level of water utility O&M expenditures that the City would incur over the forecast period we applied the escalation rates shown in Table 9 below.

TABLE 9: WATER O&M ESCALATION RATES

Category	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Wages & Salaries	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Benefits	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Pension	0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Medical	0%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Materials/Supplies	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
General	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Vehicle	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Pilot	0%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Depric:Depic Equip Replace	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cost Alloc Plan-Expense	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Utilities	0%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Maintenance	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Capita Outlay	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Water Supply Costs	0%	0%	0%	0%	5%	5%	5%	5%	5%	5%	5%	5%
KWA Bond Payment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
KWA Initiation Fee	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Purchase of KWA raw water	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Transfer to 101	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Transfer to 493	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

The rates shown above were developed based on discussions with City staff, and our experience with similar utilities.

Forecast Water Utility Operation and Maintenance Expenditures

Tables 10 and 11 on the following page indicate the estimated level of water utility O&M expenditures over the forecast period, both by the escalation rate categories and by department.
In FY 2014, the largest O&M expenditures related to the "Water Plant-Operations" department within which the bulk water purchases from DWSD were included. Note that this amount decreases significantly in FY 2015 and going forward as the City transitions from DWSD to KWA. Excluding purchased water, the most notable expenditures are associated with personnel: Wages and Salaries, Benefits, Pension, and the City's share of retiree healthcare benefits ("Cost Alloc. Plan-Expense"). In general, water O&M expenditures are projected to decrease from around $36 Million currently to $21 Million in FY 2015 with inflationary increases thereafter.

TABLE 10: WATER O&M BY CATEGORY

O&M SUMMARY (BY EXPENDITURE CATEGORY)

Category	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY2020	Forecast FY 202	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Wages & Salaries	$ 3,228,467	$ 3,672,226	$ 3,732,409	$ 3,996,875	$ -,012,751	$ 4,,03,134	$ 4,297,,28	$ 4,,348 42	$ 4,516,387	$ -,661,878	$ 4,791,405	$ 4,955,,78
Benefits	$ 1,,87,924	$ 1,223,652	$ 1,250,259	$ 1,298,077	$ -,397,019	$ 1,397,110	$ 1,418,-43	$ 1,,60997	$ 1,504,827	$,,89,97	$ 1,,95,,41	$ 1,644,065
Pension	$ 1,809,008	$ 1,809,252	$ 1,,87 915	$ 2,,87,,11	$ 2,191,,7E	$ 2,201,260	$ 2,416,,23	$ 2,,97 130	$ 2,568,,06	$ 2,,97,,05	$ 2,,37,,66	$ 3,,63,900
Medical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Materials/Supplies	$ 1,615,800	$ 2,503,724	$ 2,,78 896	$ 2,,28,,89	$ 2,,98,,94	$ 2,,7C,181	$ 2,54 ,,87	$ 2,,60615	$ 2,,00,,94	$ 2,,80,21	$ 2,,63,,67	$ 2,,40,,26
General	$ 3,,11,,32	$ 3,,43,,20	$ 3,,56,,88	$ 3,,62,,86	$ 3,,62,,7E	$ 3,,75,,53	$ 3,,91,,17	$ 4,,11 148	$ 4,,34,,82	$ -,,61,,85	$ 4,,,,7-2	$ 4,,27,,-94
Vehicle	$ 650,,36	$ 692,,26	$ 732,,72	$ 723,,53	$ 715,,6E	$,,67,,82	$ 7,,,,64	$ 814,,00	$ 330,,08	$ 864,,08	$ 80,,,24	$ 916,,28
Rent	$ 140,,50	$ 754,,63	$ 770,,52	$ 786,,53	$ 801,,62	$ 817,,86	$ 833,,20	$ 850,,00	$ 367,,04	$ 884,,48	$ 902,,20	$ 920,,83
Depreciable Equip Replace	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cost Alloc Plan Expense	$ 4,040,800	$ 4,,61,,18	$ 4,,26,,73	$ 4,,15,,73	$ -,,7,,31	$ 4,,84,,63	$ 4,,64,,88	$ 4,,50428	$ 5,,18,,11	$ 5,,72,,06	$ 5,,30,,20	$ 5,,53,,36
Utilities	$ 910,,00	$ 1,,55,,20	$ 1,,37 ,,08	$ 1,,47,,08	$ -,,36,,6E	$ 1,,87,,32	$ 1,,61,,41	$ 1,,,7201	$ 1,,86,,03	$ -,,67,,22	$ 1,,31,,7-9	$ 2,,38,,88
Maintenance	$ -,,7,,00	$ 42,,00	$ 43,,09	$ 44,,08	$ 46,,,E	$ 47,,02	$ 48,,61	$ 50428	$ 51,,76	$ 53,,05	$ 55,,06	$ 57,,36
Capital Outlay	$ 60,,00	$ 30,,00	$ 31,,2"	$ 32,,82	$ 33,,6E	$ 34,,78	$ 35,,22	$ 36,,06	$ 38,,09	$ 39,,40	$ 40,,,7	$ 41,,27
Water Supply Costs	$ 18,000,,00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BOR Bond Payment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BOR Filtration Fee	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase of CVP water	$ -	$ -	$ -	$ 1,,1,,00	$ -,,1,,00	$ 1,,1,,00	$ 1,,1,,00	$ 1,,1,,00	$ 1,,1,,00	$ -,,1,,00	$ 1,,1,,00	$ 1,,1,,00
Transfer to 101	$ 1,,30,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00	$ -,,00,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00	$ 1,,10,,00	$ -,,00,,00	$ 1,,10,,00	$ 1,,00,,00
Transfer to 490	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ 30,005,200	$ 21,400,441	$ 22,140,012	$ 20,316,057	$ 20,988,204	$ 24,705,140	$ 25,434,000	$ 25,,007 15	$ 26,300,,00	$ 27,,74,140	$ 30,007,,24	$ 25,,49,,00

TABLE 11: WATER O&M BY DEPARTMENT

O&M DETAIL FOR FISCAL YEAR ENDED JUNE 30

DEPARTMENT	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY2019	Forecast FY2020	Forecast FY2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Dept 535.100-Utilities - Water Administration	$ 7,492,304	$ 7,718,511	$ 7,946,452	$ 8,179,,97	$ 3,419,365	$ 8,667,940	$ 8,922,374	$ 9,186,486	$ 5,457,512	$ 9,706,685	$ 10,024,266	$ 0,323,546
Total Dept 535.205-Utilities - Water Cross Connection Prog	$ 104,,59	$ 108,204	$ 112,,07	$ 116,015	$ 120,142	$ 24,426	$ 128,872	$ 133,488	$ 138,279	$ 143,254	$ 148,419	$ 153,782
Total Dept 540.100-Water Service Center Management	$ 1,223,240	$ 1,214,890	$ 1,261,276	$ 1,324,940	$ 1,366,926	$ 1,,10,276	$,,455,037	$ 1,,01,267	$ 1,548,985	$ 1,,98,279	$ 1,549,,72	$ 1,,01,738
Total Dept 540.200-WSC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 540.210-Miscellaneous Heating - Water	$ 730,,67	$ 630,,81	$ 661,,28	$ 70,,42	$ 691,,60	$ 610,,79	$ 631,,67	$ 663,,03	$ 6,,6,,7	$ 700,,81	$ 724,,59	$ 65,,16
Total Dept 540.300-Misc Water Distribution Mains	$ 3,,91,,77	$ 3,,88,,36	$ 3,,04,,47	$ 3,,65,,07	$ 4,,01,,8"	$ 4,,31,,81	$ -,,07,,86	$ 4,,97,,14	$ 4,,81,,18	$ 4,,45,,74	$ 5,,11,,23	$ 5,,87,,78
Total Dept 545.200-Water Plant - Operations	$ 21,,5,,88	$ 5,,20,,88	$ 5,,03,,01	$ 6,,00,,05	$ 5,,82,,80	$ 6,,70,,39	$ 6,,8,,22	$ 7,,88,,21	$ 7,,77,,75	$ 7,,95,,25	$ 7,,20,,02	$ 7,,53,,20
Total Dept 545.201-Water Plant Maintenance	$ 1,,88,,81	$ 1,,29,,51	$ 1,,64,,38	$ 1,,40,,51	$ 1,,79,,36	$ 1,,80,,43	$,,22,,75	$ 1,,97,,97	$ 2,,55,,13	$ 2,,25,,51	$ 2,,97,,62	$ 2,,72,,29
Total Dept 545.202-Water Plant - Dam Operations	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 545.203-Water Plant - Dam Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 545.300-Water Plant - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 965.101-Transfers out to Fund 101	$ 1,,30,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00	$ -,,10,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GRAND TOTAL WATER UTILITY	$ 36,,85,,26	$ 21,,83,,41	$ 22,,40,,12	$ 23,,16,,57	$ 23,,00,,0-	$ 24,,05,,48	$ 25,,34,,03	$ 26,,88,,15	$ 26,,08,,30	$ 27,,74,,48	$ 28,,07,,24	$ 29,,63,,68

3.2.3 Water Utility CIP and CIP Financing

Tables 12 and 13 on the following two pages indicate the water capital improvements program ("CIP") provided by the City and the CIP financing plan.

As the plan we received from the City was presented in current year dollars, we escalated the project amounts 3% per year from FY 2015 onward. The largest capital improvements in dollar terms are associated with the rehabilitation of the City's water treatment plant (i.e. Water Plant-Phase II projects). These projects are in large part associated with transitioning the City's water treatment plant from back-up status to the primary source of treated water for the City. As discussed above, the improvements to the water treatment plant will allow the City to treat raw water purchased from the KWA for distribution to City customers. In general, the level of spending in the CIP decreases from $10 Million to $7.5 Million as the plant improvements are completed and increases again in the out years due to planned annual recapitalization.

There are three items of note in Table 13. First, all projects are projected to be cash financed at this time. The City may seek to leverage its revenue stream in the future via use of the State of Michigan's ("State") Drinking Water Revolving Revenue Fund ("DWRRF") loan program. This would be particularly beneficial for major water capital improvements, as it would spread the financing responsibility over existing and future ratepayers who receive the benefit of the improvement throughout the asset's useful life. Second, note that the proceeds from the recently completed sale of the Flint pipeline to Genesee County have been included to offset the costs of the treatment plant improvements. Finally, note that the "uses" category includes a line for additional uses, which represent the KWA initiation payments required of the City until it begins paying its share of KWA debt service in FY 2017.

TABLE 12: WATER CAPITAL IMPROVEMENTS PROGRAM

WATER CAPITAL PROJECTS (ESCALATED)																
Project		Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
2007 of Transmission Main Annually	WSIC Water Fund	$ -	$ 2,160,000	$ 2,052,220	$ 2,041,060	$ 2,966,303	$ 3,014,110	$ 3,104,500	$ 3,197,072	$ 3,292,002	$ 3,382,410	$ 3,494,100	$ 3,589,000
Water Meter Replacement	WSIC Water Fund	$ 500,000	$ 1,287,500	$ 1,326,125	$ 54,635	$ 56,275	$ 57,964	$ 59,703	$ 61,494	$ 63,339	$ 65,239	$ 67,196	$ 69,212
Data Collection and CIS Implementation	WSIC Water Fund	$ -	$ 515,000	$ 530,450	$ 546,364	$ 112,561	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Vehicles, Dump Truck, Flatbeds, Step Van, Tractor	WSIC Water Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Valve Exercising	WSIC Water Fund	$ 80,000	$ 61,800	$ 63,654	$ 65,564	$ 67,531	$ 69,565	$ 71,643	$ 73,792	$ 76,006	$ 78,286	$ 80,635	$ 83,054
Water Plant Phase II, Segment I Rehabilitation	Water Plant	$ 7,200,000	$ 1,030,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Plant Phase II, Segment II Lime Residual Disposal	Water Plant	$ 795,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Toney Rd. Booster Station Upgrades	Water Plant	$ 120,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Center St. Electrical Upgrades	Water Plant	$ 600,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Westside Roof Replacement	Water Plant	$	$	$	$	$	$	$	$	$	$	$	
24" Water Line Loop	Water Plant	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
SCADA Upgrades	Water Plant	$ 400,000	$ 412,000	$ 424,360	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Plant 2 to Dort Reservoir Lift Pump Station	Water Plant	$ -	$ 2,060,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Residual Treatment Solids Handling	Water Plant	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Plant 2 Lab and Ops Center Roof Replacement	Water Plant	$ -	$ 257,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Electrical Upgrades	Water Plant	$ -	$ 317,598	$ 368,906	$ 401,694	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Raw Water Line to PS 4	Water Plant	$	$	$ 636,540	$	$	$	$	$	$	$	$	
Alum Feed System	Water Plant	$ -	$ -	$ 38,253	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Post Filtration System	Water Plant	$ -	$ -	$ 367,229	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Hamilton Dam Sheet Piling	Water Plant	$ -	$ -	$ 1,060,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Yard Valve Replacement 4	Water Plant	$ -	$ -	$ -	$ 218,545	$ 225,102	$ 231,855	$ 238,810	$ 245,975	$ 253,354	$ 260,955	$ 268,783	$ 276,847
Phosphoric Acid Feed System	Water Plant	$	$	$	$ 185,764	$	$	$	$	$	$	$	
Elevated Tank Altitude Valve Rebuilt	Water Plant	$ -	$ -	$ -	$ 54,635	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Fencing Around Water Plant	Water Plant	$ -	$ -	$ -	$ 109,270	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Security Cameras	Water Plant	$ -	$ -	$ -	$ 10,927	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Thread Lake Dam Replacement	Water Plant	$ -	$ -	$ -	$ 666,635	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Various Control Station Roof Replacements	Water Plant	$ -	$ -	$ -	$ -	$ 562,754	$ 579,637	$ 597,026	$ 614,937	$ 633,385	$ 652,387	$ 671,958	$ 692,117
Replace Pump 1@ PS#3 with VFD	Water Plant	$ -	$ -	$ -	$ -	$ 45,001	$ 46,371	$ 47,762	$ 49,195	$ 51,671	$ 52,191	$ 53,757	$ 55,369
Replace Pumps 1&2 @ PS#4 with VFD's	Water Plant	$	$	$	$	$ 168,826	$ 173,891	$ 179,108	$ 184,481	$ 190,016	$ 195,716	$ 201,587	$ 207,635
Holloway Drum Gate Rehab	Water Plant	$ -	$ -	$ -	$ -	$ 1,125,509	$ 1,159,274	$ 1,194,052	$ 1,229,874	$ 1,266,770	$ 1,304,773	$ 1,343,916	$ 1,384,234
Ongoing System Re-Capitalization	WSIC Water Fund	$ -	$ -	$ 530,450	$ 1,092,727	$ 1,125,509	$ 1,159,274	$ 1,194,052	$ 1,841,811	$ 1,900,166	$ 1,957,180	$ 2,016,895	$ 2,076,351
		$ 9,695,000	$ 8,267,398	$ 8,040,197	$ 6,285,795	$ 6,415,400	$ 6,401,005	$ 7,289,710	$ 7,502,231	$ 7,727,207	$ 7,960,116	$ 8,197,800	$ 8,443,827

TABLE 13: WATER CIP FINANCING PLAN

Water Construction Fund/Account		Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Beginning CIP Fund Balance													
Beginning Year Construction Fund Balance		$ -	$ 144,700	$ 289,302	$ 188,165	$ 439,409	$ 18,009	$ 26,074	$ 242,355	$ 240,125	$ 12,827	$ 53,711	$ 365,821
Carry-Over CIP from Previous Year		$ -											
Net Funds Available for Current CIP		$ -	$ 144,700	$ 289,302	$ 188,165	$ 439,409	$ 18,009	$ 26,074	$ 242,355	$ 240,125	$ 12,827	$ 53,711	$ 365,821
Sources of CIP Financing													
Water Revenue Bonds Issued		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Commercial Paper Program		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Rate Revenue Financing (Cash)		$ 7,000,000	$ 9,000,000	$ 8,500,000	$ 6,900,000	$ 6,000,000	$ 6,500,000	$ 7,500,000	$ 7,500,000	$ 7,500,000	$ 8,000,000	$ 8,500,000	$ 8,500,000
SDC Receipts Used for CIP Financing				-									
Proceeds from Sale of Flint Waterline		$ 3,987,700											
		$ 10,987,700	$ 9,144,700	$ 8,789,302	$ 6,988,165	$ 6,439,409	$ 6,518,009	$ 7,526,074	$ 7,742,355	$ 7,740,125	$ 8,012,827	$ 8,553,711	$ 8,865,821
Uses of CIP Funds													
Total WSC Water Fund		$ 650,000	$ 4,027,300	$ 5,112,929	$ 4,600,381	$ 4,288,189	$ 4,300,907	$ 5,026,960	$ 5,177,769	$ 5,339,102	$ 5,499,095	$ 5,697,888	$ 5,827,625
Total Water Plant		$ 9,115,000	$ 4,240,098	$ 2,997,208	$ 1,636,375	$ 2,127,212	$ 2,191,028	$ 2,295,759	$ 2,324,462	$ 2,394,195	$ 2,486,021	$ 2,540,002	$ 2,616,202
Additional Uses		$ 1,168,000	$ 584,000	$ 584,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Current Year CIP		$ 10,843,000	$ 8,851,398	$ 8,624,137	$ 6,236,756	$ 6,415,400	$ 6,491,935	$ 7,289,719	$ 7,502,231	$ 7,727,297	$ 7,985,116	$ 8,197,890	$ 8,443,827
Bond Issuance Costs		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Refunding of Commercial Paper		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
EQUALS: Ending CIP Fund Balance		$ 144,700	$289,302	$188,165	$439,409	$ 18,009	$26,074	$242,355	$240,125	$ 12,827	$53,711	$365,821	$ 411,994
Target Balance (% of Next Years CIP)	25.00%	$ 2,212,850	$ 2,155,094	$ 1,588,999	$ 1,609,850	$ 1,622,984	$ 1,830,990	$ 1,875,568	$ 1,931,824	$ 1,988,779	$ 2,049,472	$ 2,110,957	$ -
Variance from Target		($2,068,150)	($1,862,732)	($1,399,774)	($1,170,441)	($1,604,575)	($1,794,859)	($1,639,202)	($1,691,700)	($1,976,952)	($1,995,762)	($1,755,136)	$ 411,994

3.2.4 Water Cash Flow Forecast

The final step in the development of the water utility financial plan involves the preparation of a comprehensive cash flow forecast. A summary of the water cash flow forecast is presented in Table 14 on the following page. The key components of the forecast are Financial Plan Inputs, Revenues, Expenditures, and Operating Performance.

- The Financial Plan Inputs component indicates the forecast rate revenue increases. These increases were determined in consultation with City staff and are designed to:
- Ensure recovery of O&M expenditures and existing water utility debt service
- Provide cash financing for the capital projects outlined in the CIP including those necessary to transition from DWSD to the KWA
- Minimize the risk associated with operating a climate dependent enterprise via the build-up of operating reserves equivalent to 90 days of O&M and Debt Service

The Revenues component indicates the revenue at existing rates discussed previously, non-rate revenue and the additional revenue generated by the rate revenue increases shown in the inputs section. Given the forecast of water demand, O&M and capital expenditures and the 90 Day operating reserve benchmark, the "additional revenue" line represents the amount of revenue needed—above existing rate revenues –-to ensure adequate recovery of the water utility's revenue requirement in each year of the forecast.

The Expenditures component indicates the major sources of expenditures for the City's water utility: O&M expenditures, Capital expenditures (Rate Revenue Financing and Debt Service) and Transfers to the Operating Reserve.

The Operating performance component indicates the year end position of the water utility with respect to a few key factors. Included are the estimated operating reserve balance, the target reserve balance (90 Days of O&M and Debt Service), the construction fund ending balance and the water utility's debt service coverage ratio.

TABLE 14: WATER CASH FLOW FORECAST

Water Utility	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
FINANCIAL PLAN INPUTS												
Cumulative %Increase		5.0%	10.3%	15.2%	18.7%	22.2%	25.3%	27.8%	30.3%	33.0%	35.6%	38.3%
Annual % Increase in Rate Revenues	0.0%	5.0%	5.0%	4.5%	3.0%	3.0%	2.5%	2.0%	2.0%	2.0%	2.0%	2.0%
REVENUES												
Grand Total Water Revenue at Existing Rates	$ 42,914,374	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575
Additional Revenue from Rate Increases	$ -	$ 1,638,100	$ 3,368,100	$ 4,983,900	$ 6,115,900	$ 7,222,300	$ 8,283,400	$ 9,104,300	$ 9,941,600	$ 10,795,700	$ 11,666,900	$ 12,555,900
Total Non-Rate Revenues	$ 886,000	$ 913,314	$ 931,644	$ 927,886	$ 928,500	$ 929,131	$ 931,745	$ 930,725	$ 933,187	$ 936,360	$ 935,527	$ 942,481
Add Transfers in from General Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Rate and Non-Rate Revenues	*$ 43,800,374*	*$ 35,313,989*	*$ 37,062,318*	*$ 38,673,761*	*$ 39,806,975*	*$ 40,914,006*	*$ 41,977,720*	*$ 42,797,601*	*$ 43,637,362*	*$ 44,494,635*	*$ 45,365,002*	*$ 46,260,556*
EXPENDITURES												
Total O&M Expenditures	*$ 36,865,205*	*$ 21,483,441*	*$ 22,140,012*	*$ 23,316,857*	*$ 23,999,504*	*$ 24,705,148*	*$ 25,434,603*	*$ 26,188,716*	*$ 26,968,360*	*$ 27,774,448*	*$ 28,607,924*	*$ 29,469,768*
Grand Total Existing and Proposed Debt Service	$ 2,747,946	$ 2,742,821	$ 2,746,423	$ 9,648,446	$ 9,644,008	$ 9,643,195	$ 9,639,827	$ 9,192,721	$ 8,676,674	$ 8,085,623	$ 8,423,746	$ 6,900,000
Water Rate Revenue Financing (Cash)	$ 7,000,000	$ 9,000,000	$ 8,500,000	$ 6,500,000	$ 6,000,000	$ 6,500,000	$ 7,500,000	$ 7,500,000	$ 7,500,000	$ 8,000,000	$ 8,500,000	$ 8,100,000
Water Transfer to Equipment Replacement Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Expenditures	*$ 9,747,946*	*$ 11,742,821*	*$ 11,246,423*	*$ 16,148,446*	*$ 15,644,008*	*$ 16,143,195*	*$ 17,139,827*	*$ 16,692,721*	*$ 16,176,674*	*$ 16,085,623*	*$ 16,923,746*	*$ 15,000,000*
Add /Less: Surplus/(Deficit)	*$ (2,752,778)*	*$ 2,087,728*	*$ 3,865,883*	*$ (791,543)*	*$ 163,465*	*$ 125,662*	*$ (597,311)*	*$ (83,836)*	*$ 492,328*	*$ 634,563*	*$ (166,668)*	*$ 1,390,788*
GROSS REVENUE REQUIREMENTS												
O&M	$ 36,865,205	$ 21,483,441	$ 22,140,012	$ 23,316,857	$ 23,999,504	$ 24,705,148	$ 25,434,603	$ 26,188,716	$ 26,968,360	$ 27,774,448	$ 28,607,924	$ 29,469,768
Capital	$ 9,747,946	$ 11,742,821	$ 11,246,423	$ 16,148,446	$ 15,644,008	$ 16,143,195	$ 17,139,827	$ 16,692,721	$ 16,176,674	$ 16,085,623	$ 16,923,746	$ 15,000,000
Operating Surplus/Deficit	$ (2,752,778)	$ 2,087,728	$ 3,865,883	$ (791,543)	$ 163,465	$ 125,662	$ (597,311)	$ (83,836)	$ 492,328	$ 634,563	$ (166,668)	$ 1,390,788
Total Gross Revenue Requirements	*$ 43,860,374*	*$ 35,313,989*	*$ 37,052,318*	*$ 38,673,761*	*$ 39,806,975*	*$ 40,974,006*	*$ 41,977,120*	*$ 42,797,601*	*$ 43,637,362*	*$ 44,494,635*	*$ 45,365,002*	*$ 46,260,556*
OPERATING PERFORMANCE												
Ending Operating Reserve Balance	$ 3,375,055	$ 5,462,823	$ 9,328,706	$ 8,537,164	$ 8,700,629	$ 9,826,291	$ 9,228,981	$ 8,945,145	$ 9,437,474	$ 10,072,037	$ 9,905,369	$ 11,296,155
Target Operating Reserve Balance	$ 9,903,283	$ 6,066,586	$ 6,221,609	$ 8,241,326	$ 8,410,878	$ 8,557,086	$ 8,768,608	$ 8,845,395	$ 8,911,288	$ 8,966,018	$ 9,257,918	$ 9,682,442
Variance From Target	$ (6,528,192)	$ (603,742)	$ 2,907,097	$ 95,838	$ 89,751	$ 1,269,205	$ 460,373	$ 99,787	$ 526,215	$ 1,107,019	$ 647,451	$ 2,303,714
Construction Fund Ending Balance	*$ 144,710*	*$ 293,302*	*$ 169,165*	*$ 433,409*	*$ 19,009*	*$ 26,074*	*$ 262,355*	*$ 240,725*	*$ 128,87*	*$ 53,711*	*$ 356,821*	*$ 417,994*
Stand Alone DSCR	2.5	5.04	5.43	1.59	1.64	1.69	1.72	1.81	1.92	2.07	1.99	2.43

3.3 WASTEWATER UTILITY FINANCIAL PLAN

3.3.1 Forecast Wastewater Units of Service and Revenues at Existing Rates

Wastewater Utility Rates

The City recovers the cost of operating the wastewater utility via volumetric rates (i.e. rates based on the amount of wastewater discharged) and fixed monthly service charges (a charge per customer bill). The City's existing wastewater volumetric charge is a uniform rate, or a rate that does not vary (on a per unit basis) as the amount of wastewater discharged varies. The existing wastewater volumetric rate structure is indicated in Table 15 below. Similar to the water utility volumetric rate structure a distinction is made between inside and outside city customers, with the outside city rate set at approximately 110% of the inside city rate.

TABLE 15: EXISTING WASTEWATER VOLUMETRIC RATES

CUSTOMER CLASS		Test-Year FY 2014 Existing Rates
Total Inside City All Classes	($/CCF)	$ 4.80
Total Outside City All Classes	($/CCF)	$ 5.29

The existing wastewater rate structure includes a fixed service charge which varies by customer water meter size. The rates are shown in Table 16 on the following page. Most Flint residential customers have a 5/8" meter and currently pay the $32.00 fixed monthly service charge. Similar to the wastewater volumetric rate, the wastewater fixed charges include an inside outside city differential (120%).

In addition to the retail wastewater rates, the City currently serves a wholesale wastewater customer, Beecher Metropolitan District ("District"). The District currently pays $1.34 per CCF of wastewater discharged, an amount that was negotiated in the 1995 Contract between the City and the District.

TABLE 16: EXISTING WASTEWATER FIXED CHARGES

CUSTOMER CLASS	Test-Year FY 2014 Existing Rates
Inside City Residential Customers	
5/8"	$ 32.00
3/4"	$ 46.92
1"	$ 65.34
1-1/2"	$ 65.34
2"	$ 65.34
Inside City Commercial/Industrial Customers	
5/8"	$ 51.92
3/4"	$ 64.43
1"	$ 84.71
1-1/2"	$ 137.84
2"	$ 196.16
3"	$ 438.06
4"	$ 721.84
6"	$ 1,459.95
8"	$ 2,148.21
10'	$ 2,918.39
12'	$ 3,426.23
16'	$ 4,523.95
20'	$ 5,326.87
Outside City Residential Customers	
5/8"	$ 41.01
3/4"	$ 56.01
1"	$ 76.99
1-1/2"	$ 76.99
2"	$ 76.99
Outside City Commercial/Industrial Customers	
5/8"	$ 58.12
3/4"	$ 73.62
1"	$ 98.05
1-1/2"	$ 164.80
2"	$ 232.43
3"	$ 522.87
4"	$ 906.01
6"	$ 1,770.13
8"	$ 2,646.52
10'	$ 3,522.54
12'	$ 4,132.57
16'	$ 5,497.91
20'	$ 6,532.02

Forecast Wastewater Units of Service

In order to forecast the level of revenue expected under existing wastewater fixed and volumetric rates, the number of wastewater accounts and the level of wastewater usage must be estimated for

the forecast period. The number of historical and forecast wastewater utility accounts is indicated in Tables 17 and 18 on the following two pages.

Note that the raw billing data appear to indicate a 14% increase in inside city accounts and an 18% increase in outside city accounts from FY 2012 to FY 2013. This increase in accounts does not appear to have been sustained into FY 2014. The City has indicated that wastewater billings have decreased approximately 12% from FY 2013. Given this change we have adjusted the forecast level of wastewater accounts to be around 13% less than their FY 2013 level. As no significant growth the City's customer base is expected, no customer growth has been forecast on a going forward basis.

TABLE 17: FORECAST INSIDE CITY WASTEWATER ACCOUNTS

Customer Class	Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Inside City Residential														
"0			-	-	-	-	-	-	-	-	-	-	-	-
"00			-	-	-	-	-	-	-	-	-	-	-	-
5/8"	24,975	28,480	24,780	24,780	24,780	24,780	24,780	24,780	24,780	24,780	24,780	24,780	24,780	24,780
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	271	337	293	293	293	293	293	293	293	293	293	293	293	293
1-1/2"	26	30	29	29	29	29	29	29	29	29	29	29	29	29
2"	9	11	9	9	9	9	9	9	9	9	9	9	9	9
Unmetered			-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Residential Remote	25,282	28,841	25,091	25,091	25,091	25,091	25,091	25,091	25,091	25,091	25,091	25,091	25,091	25,091
Inside City Commercial/Industrial														
"0			-	-	-	-	-	-	-	-	-	-	-	-
"00			-	-	-	-	-	-	-	-	-	-	-	-
5/8"	314	402	360	360	360	360	360	360	360	360	360	360	360	360
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	240	273	238	238	238	238	238	238	238	238	238	238	238	238
1-1/2"	236	263	229	229	229	229	229	229	229	229	229	229	229	229
2"	237	271	236	236	236	236	236	236	236	236	236	236	236	236
3"	78	89	77	77	77	77	77	77	77	77	77	77	77	77
4"	56	61	53	53	53	53	53	53	53	53	53	53	53	53
6"	36	41	36	36	36	36	36	36	36	36	36	36	36	36
8"	3	3	3	3	3	3	3	3	3	3	3	3	3	3
10"			-	-	-	-	-	-	-	-	-	-	-	-
12"			-	-	-	-	-	-	-	-	-	-	-	-
16"			-	-	-	-	-	-	-	-	-	-	-	-
20"			-	-	-	-	-	-	-	-	-	-	-	-
Unmetered			-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Commercial/Industrial	1,261	1,409	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221
Total Inside City Accounts	26,543	30,244	26,312	26,312	26,312	26,312	26,312	26,312	26,312	26,312	26,312	26,312	26,312	26,312
		14%	-13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

TABLE 18: FORECAST OUTSIDE CITY WASTEWATER ACCOUNTS

Customer Class	Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Outside City Residential														
¾"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
¾"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
5/8"	6	7	6	6	6	6	6	6	6	6	6	6	6	6
3/4"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
1"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
1 1/2"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
2"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Unmetered	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Residential Remote	6	7	6	6	6	6	6	6	6	6	6	6	6	6
Outside City Commercial/Industrial														
¾"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
¾"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/8"	5	5	4	4	4	4	4	4	4	4	4	4	4	4
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	2	3	3	3	3	3	3	3	3	3	3	3	3	3
1 1/2"	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2"	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unmetered	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Commercial/Industrial	11	13	11	11	11	11	11	11	11	11	11	11	11	11
Total Outside City Accounts	17	20	17	17	17	17	17	17	17	17	17	17	17	17
		18%	-15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

In addition to forecasting the number of accounts by meter size and customer class, the level of wastewater usage must also be estimated for the forecast period. The historical and forecast level of wastewater usage by customer class can be on Table 19 on the following page.

Note that—consistent with the significant increase in inside city water accounts in FY 2013—inside city wastewater usage has increased significantly in FY 2013 (18%). Given the uncertainty surrounding this most recent upswing in billed wastewater usage, and the subsequent decrease in billed wastewater revenues, retail usage has been forecast at 15% below FY 2013 levels for FY 2014, FY 2015 and the remainder of the ten year forecast period.

TABLE 19: FORECAST WASTEWATER USAGE

Customer Class	Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
INSIDE CITY														
Inside City Metered Wastewater Rates														
Total Inside City Residential	1,339,611	1,764,901	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886
Total Inside City Commercial/Industrial	1,205,044	1,645,554	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721
Total Inside City All Classes	2,745,655	3,600,455	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387
		27%	-17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
OUTSIDE CITY														
Outside City Metered Wastewater Rates														
Total Outside City Residential	219	242	216	216	216	216	216	216	216	216	216	216	216	216
Total Outside City Commercial/Industrial	8,505	8,249	7,012	7,012	7,012	7,012	7,012	7,012	7,012	7,012	7,012	7,012	7,012	7,012
Total Outside City All Classes	8,724	8,491	7,217	7,217	7,217	7,217	7,217	7,217	7,217	7,217	7,217	7,217	7,217	7,217
		-3%	-15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TOTAL RETAIL														
Total Residential	1,339,830	1,765,143	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872
Total Commercial/Industrial	1,213,549	1,653,803	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733
	2,754,200	3,598,946	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604
		27%	-19%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
WHOLESALE														
Beecher Metro Wholesale Rate														
Beecher Metro Wholesale Rate	620,369	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673
GRAND TOTAL WASTEWATER USAGE	3,374,572	4,022,619	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277
		23%	-13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Forecast Wastewater Revenue at Existing Rates

Wastewater utility revenue at existing rates is the sum of wastewater volumetric and fixed charge revenue. Fixed charge revenue at existing rates was determined by multiplying the number of forecast accounts at each meter size, by the existing rate for that size and again by 12 for each of the monthly bills. Volumetric revenue was determined by multiplying the level of consumption by customer class, by the existing volumetric rates. Table 20 on the following page indicates the level of wastewater revenue at existing rates.

Total wastewater revenue at existing rates in FY 2014 is forecast to be approximately $27 Million. Of this, approximately 54% is derived from the volumetric rates and 46% is associated with the fixed monthly service charges. On a going forward basis, the level of revenues at existing wastewater rates would remain at $27 Million assuming consumption remains flat and the City makes no adjustments to wastewater rates.

TABLE 20: FORECAST WASTEWATER REVENUE AT FY 2014 RATES

SUMMARY OF FORECAST WASTEWATER RATE REVENUE AT EXISTING RATES												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
GRAND TOTAL SYSTEM USAGE REVENUE	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754
GRAND TOTAL SYSTEM FIXED CHARGE REVENUE	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621
GRAND TOTAL WASTEWATER REVENUE AT EXISTING RA	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374

SUMMARY OF METERED WASTEWATER REVENUE												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
TOTAL RETAIL USAGE REVENUE												
Total Inside City Residential	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083
Total Inside City Commercial/Industrial	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917
	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000
WHOLESALE USAGE REVENUE												
Beecher Metro/Wholesale Rate	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753
GRAND TOTAL SYSTEM USAGE REVENUE	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754

SUMMARY OF FIXED CHARGE WASTEWATER REVENUE												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
TOTAL RETAIL FIXED CHARGE REVENUE												
Total Inside City Residential	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131
Total Inside City Commercial/Industrial	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974
	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105
WHOLESALE FIXED CHARGE REVENUE												
Beecher Metro Fixed Charge	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516
GRAND TOTAL SYSTEM FIXED CHARGE REVENUE	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621

3.3.2 Forecast Wastewater Utility Operation and Maintenance Expenditures

Wastewater O&M Inflation Rates

The budgets provided by the City are the basis for the forecast of wastewater utility O&M expenditures. To forecast the level of wastewater utility O&M expenditures that the City is projected to incur over the forecast period we applied escalation rates shown in Table 21 below.

TABLE 21: WASTEWATER O&M ESCALATION RATES

Category	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Wages & Salaries	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Benefits	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Pension	0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Medical	0%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Materials/Supplies	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
General	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Vehicle	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Pilot	0%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Depr/Depic Equip Replace	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cost Alloc Plan Expense	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Utilities	0%	-9%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Maintenance	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Capital Outlay	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Water Supply Costs	0%	0%	0%	0%	5%	5%	5%	5%	5%	5%	5%	5%
KWA 3rd Payment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
KWA Ariba on Fee	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Purchase of KWA raw water	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Transfer to 101	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Transfer to 493	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Forecast Wastewater Operation and Maintenance Expenditures

Tables 22 and 23 on the following page indicate level of wastewater O&M expenditures over the forecast period, by the escalation rate categories and by department.

Unlike the water utility there is no single large cost driver. The most notable expenditures are associated with personnel: Wages and Salaries, Benefits, Pension, and the City's share of retiree healthcare benefits ("Cost Alloc. Plan-Expense"). In general, wastewater O&M expenditures are projected to decrease from 24 Million in FY 2014 to 23 Million in FY 2015 with inflationary increases thereafter.

TABLE 22: WASTEWATER O&MBY CATEGORY

Category	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Wages & Salaries	$ 4,299,878	$ 4,301,275	$ 4,451,913	$ 4,594,440	$ 4,721,973	$ 4,850,659	$ 5,018,542	$ 5,189,628	$ 5,314,523	$ 5,474,961	$ 5,636,263	$ 5,817,439
Benefits	$ 1,584,803	$ 1,595,181	$ 1,643,036	$ 1,692,327	$ 1,743,097	$ 1,795,390	$ 1,849,252	$ 1,904,721	$ 1,961,871	$ 2,020,727	$ 2,081,349	$ 2,143,790
Pension	$ 2,047,927	$ 2,091,618	$ 2,156,199	$ 2,306,009	$ 2,421,309	$ 2,542,375	$ 2,669,494	$ 2,802,968	$ 2,943,117	$ 3,090,273	$ 3,244,786	$ 3,407,026
Medical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Materials&Supplies	$ 1,491,050	$ 1,535,782	$ 1,581,856	$ 1,629,311	$ 1,678,190	$ 1,728,535	$ 1,780,392	$ 1,833,803	$ 1,888,818	$ 1,945,482	$ 2,003,847	$ 2,063,962
General	$ 3,011,203	$ 1,752,239	$ 1,804,806	$ 1,858,951	$ 1,914,719	$ 1,972,161	$ 2,031,395	$ 2,092,266	$ 2,155,033	$ 2,219,684	$ 2,286,275	$ 2,354,863
Vehicle	$ 760,802	$ 783,627	$ 807,135	$ 831,340	$ 856,280	$ 881,970	$ 908,438	$ 935,691	$ 963,762	$ 992,675	$ 1,022,455	$ 1,053,129
Plant	$ 1,218,300	$ 1,242,666	$ 1,267,519	$ 1,292,870	$ 1,318,727	$ 1,345,102	$ 1,372,004	$ 1,399,444	$ 1,427,433	$ 1,455,981	$ 1,485,101	$ 1,514,803
Depriat/Depltic Equip Replace	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cost/Misc Plan Expense	$ 5,038,744	$ 5,189,906	$ 5,345,604	$ 5,505,972	$ 5,671,151	$ 5,841,285	$ 6,016,524	$ 6,197,020	$ 6,382,930	$ 6,574,418	$ 6,771,651	$ 6,974,800
Utilities	$ 2,289,000	$ 2,218,320	$ 1,960,941	$ 2,099,378	$ 2,120,954	$ 2,205,792	$ 2,294,023	$ 2,385,784	$ 2,481,216	$ 2,580,464	$ 2,683,683	$ 2,791,030
Maintenance	$ 401,000	$ 413,040	$ 425,057	$ 430,009	$ 432,004	$ 455,004	$ 479,201	$ 493,917	$ 500,705	$ 523,987	$ 539,717	$ 555,909
Capital Outlay	$ 45,000	$ 49,131	$ 50,606	$ 52,124	$ 53,687	$ 55,297	$ 56,956	$ 58,665	$ 60,425	$ 62,238	$ 64,105	$ 66,028
Water Supply Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
KIWA Bond Payment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
KIWA Initiation Fee	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase of KIWA raw water	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Interest	$	$	$	$	$	$	$	$	$	$	$	$
Principal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Transfer to 101	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000
Transfer to 499	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ 24,329,627	$ 23,053,302	$ 23,304,671	$ 24,011,980	$ 24,812,101	$ 25,557,113	$ 26,327,481	$ 27,124,115	$ 27,947,961	$ 28,800,000	$ 29,681,251	$ 30,502,770

TABLE 23: WASTEWATER O&MBY DEPARTMENT

O&M DEFAULT FOR FISCAL YEAR ENDED JUNE 30												
DEPARTMENT	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Dept 505.101-Utilities - Sewer Administration	$ 7,442,420	$ 7,003,942	$ 7,071,570	$ 6,980,610	$ 6,925,945	$ 6,903,051	$ 6,907,000	$ 9,000,091	$ 9,310,430	$ 9,502,201	$ 9,656,047	$ 10,107,302
Total Dept 540.1000/Water Service Center Management	$ 2,113,446	$ 884,446	$ 866,467	$ 844,148	$ 922,849	$ 962,602	$ 953,141	$ 1,014,800	$ 1,047,613	$ 1,081,318	$ 1,116,254	$ 1,152,489
Total Dept 540.3000/WSC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 540.207-Misc-Meter Reading - Sewer	$ 700,610	$ 700,419	$ 702,959	$ 700,270	$ 614,510	$ 641,000	$ 639,700	$ 680,000	$ 920,970	$ 950,140	$ 982,417	$ 1,025,002
Total Dept 540.2300/Misc-Sewer Maint/Construction	$ 2,100,188	$ 2,197,936	$ 2,286,417	$ 2,397,282	$ 3,102,854	$ 3,212,232	$ 3,326,725	$ 3,443,418	$ 3,566,864	$ 3,682,459	$ 3,824,049	$ 3,960,627
Total Dept 580.1000/Wpc-Operations	$ 5,176,142	$ 5,516,166	$ 5,767,152	$ 5,957,629	$ 5,755,176	$ 5,960,058	$ 6,172,481	$ 6,392,768	$ 6,621,295	$ 6,858,238	$ 7,104,048	$ 7,359,024
Total Dept 580.2000/Wpc-Third Ave Pump Station	$ 900,913	$ 735,282	$ 761,801	$ 780,306	$ 817,834	$ 847,425	$ 878,110	$ 909,900	$ 942,900	$ 977,257	$ 1,012,807	$ 1,049,620
Total Dept 580.4000/Wpc-Maintenance Expense	$ 2,817,849	$ 2,912,411	$ 3,009,177	$ 3,109,314	$ 3,212,980	$ 3,320,211	$ 3,431,205	$ 3,545,180	$ 3,666,132	$ 3,788,309	$ 3,916,829	$ 4,047,846
Total Dept 580.5000/WPC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 580.800-Mon_dep_Exp-Sewer Portion	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 966.101-Transfers out to fund 101	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GRAND TOTAL WASTEWATER UTILITY	$ 24,329,627	$ 23,053,302	$ 23,304,671	$ 24,011,980	$ 24,812,101	$ 25,557,113	$ 26,327,481	$ 27,124,115	$ 27,947,961	$ 28,800,000	$ 29,681,251	$ 30,502,770

3.3.3 Wastewater Utility CIP and CIP Financing

Tables 24 and 25 on the following two pages indicate the wastewater capital improvements program ("CIP") provided by the City and the CIP financing plan. As the plan we received from the City was presented in current year dollars, we escalated the project amounts 3% per year from FY 2015 onward. The largest capital projects relate to rehabilitation of the City's wastewater treatment plant and pumping stations. In general, the level of spending in the CIP peaks at from $12 Million in FY 2018 and returns to an average level of around $8 Million going forward.

Table 25 summarizes the wastewater utility CIP financing plan. While the CIP financing plan used for this report only incorporates cash financing, the City may seek to leverage its revenue stream in the future via the issuance of revenue bonds or other alternative financing instruments. This would be particularly beneficial for major wastewater capital improvements, as it would spread the financing responsibility over existing and future ratepayers who receive the benefit of the improvement throughout the asset's useful life.

TABLE 24: WASTEWATER CAPITAL IMPROVEMENTS PROGRAM

WASTEWATER CAPITAL PROJECTS (ESCALATED)																			
Project		Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Pipe Lining	WSC Sewer Fund	$ 1,520,000	$ 1,699,200	$ 1,739,876	$ 1,803,000	$ 1,857,090	$ 1,912,802	$ 1,970,186	$ 2,029,292	$ 2,090,171	$ 2,152,876	$ 2,217,462	$ 2,283,986
Root Control	WSC Sewer Fund	$ 350,000	$ 350,500	$ 371,315	$ 382,454	$ 393,928	$ 405,746	$ 417,918	$ 430,455	$ 443,370	$ 456,671	$ 470,371	$ 484,482
Meter Replacement	WSC Sewer Fund	$ 250,000	$ 1,287,500	$ 1,326,125	$ 54,636	$ 56,275	$ 57,964	$ 59,703	$ 61,494	$ 63,339	$ 65,239	$ 67,196	$ 69,212
Vehicles: Dump Trunk, 2 Vactor Lease Payments, 2 Flatbed Trucks, 1 Tractor	WSC Sewer Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Biosolids Load Out Facility	Water Pollution Control	$ -	$ 2,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Biosolids Load Out Facility Engineering	Water Pollution Control	$ 116,350	$ 92,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Engineering for S2 Grant	Water Pollution Control	$	$	$	$	$	$	$	$	$	$	$	$
EPS Bar Screen Replacement	Water Pollution Control	$ 1,764,547	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Final Tank Retrofit-Four of Eight Tanks	Water Pollution Control	$ 637,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
MWPS Barscreen Replacement	Water Pollution Control	$ 440,522	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
RTB Flowmeter	Water Pollution Control	$ 32,497	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ball B Actuator	Water Pollution Control	$ 19,973	$	$	$	$	$	$	$	$	$	$	$
Sigma Samplers	Water Pollution Control	$ 11,670	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GPS Units	Water Pollution Control	$ 20,995	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TWPS Automation	Water Pollution Control	$ 188,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TWPS Conveyor	Water Pollution Control	$ 12,588	$	$	$	$	$	$	$	$	$	$	$
Lighting Upgrades	Water Pollution Control	$ 159,063	$	$	$	$	$	$	$	$	$	$	$
Disinfection Upgrades	Water Pollution Control	$ 71,575	$ 154,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Replacement of Battery A Grit	Water Pollution Control	$ -	$ -	$ 1,030,900	$ -	$ 2,207,952	$ 579,030	$ 119,400	$ 122,900	$ 126,577	$ 130,477	$ 134,592	$ 100,423
Third Ave Pumping Station Electrical Switchgear	Water Pollution Control	$ -	$ -	$ 1,909,620	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Final Tank Coatings	Water Pollution Control	$	$	$	$	$	$	$	$	$	$	$	$
Major Concrete Repairs	Water Pollution Control	$ -	$ 113,300	$ 365,225	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aeration Blower Replacement	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aeration Blower Controls	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Major Valve Repairs	Water Pollution Control	$ -	$ -	$ 212,180	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Replacement of Lift Stations	Water Pollution Control	$	$	$ 285,225	$	$	$	$	$	$	$	$	$
HVAC Upgrades	Water Pollution Control	$ -	$ 412,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Primary Tank Rebuild	Water Pollution Control	$ -	$ 772,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Curbside Coatings	Water Pollution Control	$ -	$ -	$ -	$ 598,814	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Influent Box Concrete Repairs	Water Pollution Control	$	$	$	$	$	$	$	$	$	$	$	$
Third Ave Pipe Repair	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Plant Roofing	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Replacement Pump for Third Ave Pumping Station	Water Pollution Control	$ -	$ -	$ -	$ -	$ 932,754	$ 579,030	$ 397,068	$ -	$ -	$ -	$ -	$ -
Replacement Pumps for EPS	Water Pollution Control	$ -	$ -	$ -	$ 655,635	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Replacement Pumps for MWPS	Water Pollution Control	$	$	$	$	$	$	$	$	$	$	$	$
Battery B Grit Piping	Water Pollution Control	$ -	$ -	$ -	$ 411,737	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Air Diffuser Upgrades-Battery B	Water Pollution Control	$ -	$ -	$ -	$ 104,277	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4160 Volt Switchgear	Water Pollution Control	$ -	$ -	$ -	$ 2,185,454	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Battery B Isolation Gates	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EPS Switchgear	Water Pollution Control	$	$	$	$	$	$	$	$	$	$	$	$
Addition to Vehicle Storage Building	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lift Station Electrical Upgrades	Water Pollution Control	$ -	$ -	$ -	$ 91,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Final Effluent Meter Replacement	Water Pollution Control	$ -	$ -	$ -	$ 109,273	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lighting Pond Upgrades	Water Pollution Control	$	$	$	$ 87,418	$	$	$	$	$	$	$	$
Blower Heater Installation	Water Pollution Control	$ -	$ -	$ -	$ 437,091	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Battery A Influent Meter Replacement	Water Pollution Control	$ -	$ -	$ -	$ 109,273	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sludge Cake Storage	Water Pollution Control	$ -	$ -	$ -	$ 327,818	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Heavy Mobile Equipment	Water Pollution Control	$ -	$ -	$ -	$ 163,909	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Air Diffuser Upgrades Battery A	Water Pollution Control	$	$ 195,700	$	$	$	$	$	$	$	$	$	$
Riverbank Improvements	Water Pollution Control	$ -	$ 82,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Final Tank Retrofit-Last Four Tanks	Water Pollution Control	$ -	$ 636,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Vehicles	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Outgoing System Recapitalization	WSC Sewer Fund	$ -	$ -	$ 2,121,800	$ 2,185,454	$ 3,376,526	$ 4,637,096	$ 4,776,209	$ 4,919,495	$ 5,067,080	$ 5,219,093	$ 5,375,666	$ 5,536,936
		$ 5,205,676	$ 7,220,300	$ 9,272,266	$ 9,783,185	$ 11,754,526	$ 8,772,882	$ 7,940,448	$ 7,853,724	$ 7,790,636	$ 8,024,395	$ 8,265,086	$ 8,513,038

TABLE 25: WASTEWATER CIP FINANCING PLAN

Water Construction Fund/Account		Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Beginning CIP Fund Balance													
Beginning Year Construction Fund Balance		$ -	$ 294,024	$ 74,024	$ 301,758	$ 18,573	$ 764,047	$ 91,165	$ 150,717	$ 86,990	$ 296,367	$ 272,002	$ 6,916
Carry-Over CIP from Previous Year		$ -											
Net Funds Available for Current CIP		$ -	$ 294,024	$ 74,024	$ 301,758	$ 18,573	$ 764,047	$ 91,165	$ 150,717	$ 86,990	$ 296,367	$ 272,002	$ 6,916
Sources of CIP Financing													
Wastewater Revenue Bonds Issued		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wastewater Commercial Paper Program		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wastewater Rate Revenue Financing (Cash)		$ 5,600,000	$7,000,000	$ 9,500,000	$ 9,500,000	$ 12,500,000	$ 7,500,000	$ 8,000,000	$ 7,500,000	$ 8,000,000	$ 8,000,000	$ 8,000,000	$ 8,500,000
SDC Receipts Used for CIP Financing													
Other Sources of CIP Financing													
		$ 5,600,000	$7,294,024	$ 9,574,024	$ 9,801,758	$ 12,518,573	$ 8,264,047	$ 8,091,165	$ 7,650,717	$ 8,086,990	$ 8,296,367	$ 8,272,002	$ 8,506,916
Uses of CIP Funds													
Total WSC Sewer fund		$ 2,120,000	$3,397,200	$ 5,555,116	$ 4,425,544	$ 5,883,819	$ 1,013,608	$ 7,224,016	$ 7,440,737	$ 7,853,999	$ 7,893,878	$ 8,130,694	$ 8,371,615
Total Water Pollution Control		$ 3,085,876	$3,883,100	$ 3,713,150	$ 5,367,640	$ 6,070,706	$ 1,159,274	$ 716,431	$ 122,987	$ 126,671	$ 130,477	$ 134,392	$ 138,423
Additional Uses													
Total Current Year CIP		$ 5,205,876	$7,280,300	$ 9,272,266	$ 9,793,185	$ 11,954,526	$ 8,172,882	$ 7,940,448	$ 7,563,724	$ 7,980,670	$ 8,024,355	$ 8,265,086	$ 8,510,038
Bond Issuance Costs		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Refunding of Commercial Paper		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
EQUALS: Ending CIP Fund Balance		$294,124	$74,024	$301,758	$18,573	$764,047	$91,165	$150,717	$86,990	$296,367	$272,002	$6,916	($6,122)
Targe Balance (% of Next Years CIP)	25.00%	$ 1,805,075	$2,318,067	$ 2,445,796	$ 2,938,631	$ 2,043,221	$ 1,985,112	$ 1,890,931	$ 1,947,689	$ 2,006,068	$ 2,056,271	$ 2,128,280	$ -
Variance from Target		($1,510,751)	($2,244,042)	($2,144,038)	($2,920,058)	($1,279,173)	($1,893,947)	($1,740,214)	($1,860,686)	($1,709,731)	($1,784,269)	($2,121,343)	($6,122)

3.3.4 Wastewater Cash Flow Forecast

The final step in the development of the wastewater utility financial plan involves the preparation of a comprehensive cash flow forecast. A summary of the wastewater cash flow forecast is presented in Table 26 on the following page. The key components of the forecast are Financial Plan Inputs, Revenues, Expenditures, and Operating Performance.

The Financial Plan Inputs component indicates the forecast rate revenue increases. These increases were determined in consultation with City staff and are designed to:

- Ensure recovery of wastewater utility O&M expenditures
- Provide cash financing for the wastewater capital projects outlined in the CIP
- Minimize risk via the build-up of operating reserves equivalent to 90 days of O&M and Debt Service

The Revenues component indicates the revenue at existing rates discussed previously, non-rate revenue and the additional revenue generated by the rate revenue increases shown in the inputs section. Given the forecast of wastewater demand, O&M and capital expenditures and the 90 Day operating benchmark, the "additional revenue" line represents the amount of revenue needed—above existing rate revenues—to ensure adequate recovery of the wastewater utility's revenue requirement going forward.

The Expenditures component indicates the major sources of expenditures for the City's wastewater utility: O&M expenditures, Capital expenditures (Rate Revenue Financing and Debt Service) and Transfers to the Operating Reserve.

The Operating performance section indicates the year end position of the wastewater utility with respect to a few key factors. Included are the estimated operating reserve balance, the target reserve balance (90 Days of O&M and Debt Service), and the construction fund ending balance.

TABLE 26: WASTEWATER CASH FLOW FORECAST

Wastewater Utility	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
FINANCIAL PLAN INPUTS												
Cumulative % Increase		7.5%	15.1%	23.1%	28.6%	31.2%	33.8%	36.5%	39.2%	42.1%	44.8%	47.7%
Annual % Increase in Rate Revenues	0.0%	7.5%	7.0%	7.0%	4.5%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
REVENUES												
Gross Total Wastewater Revenue at Existing Rates	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374
Additional Revenue from Rate Increases	$ -	$ 2,033,000	$ 4,173,500	$ 6,440,100	$ 7,948,500	$ 8,663,000	$ 9,381,300	$ 10,352,200	$ 10,880,500	$ 11,666,900	$ 12,456,800	$ 13,260,500
Total Non-Rate Revenues	$ 395,372	$ 423,662	$ 451,948	$ 480,068	$ 507,741	$ 535,354	$ 561,178	$ 590,171	$ 596,437	$ 612,261	$ 627,951	$ 643,618
Add Transfers in from General Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Rate and Non-Rate Revenues	*$ 28,172,746*	*$ 30,234,237*	*$ 32,371,823*	*$ 34,613,542*	*$ 36,148,616*	*$ 36,975,728*	*$ 37,970,242*	*$ 38,722,865*	*$ 39,207,231*	*$ 39,956,535*	*$ 40,861,716*	*$ 41,678,492*
EXPENDITURES												
Total O&M Expenditures	*$ 24,323,527*	*$ 23,653,392*	*$ 23,394,671*	*$ 24,051,589*	*$ 24,812,101*	*$ 25,557,115*	*$ 26,327,481*	*$ 27,124,165*	*$ 27,947,961*	*$ 28,800,000*	*$ 29,681,251*	*$ 30,592,770*
Gross Total Existing and Proposed Debt Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wastewater Rate Revenue Financing (Cash)	$ 5,700,000	$ 7,700,000	$ 9,900,000	$ 9,900,000	$ 12,700,000	$ 8,700,000	$ 8,700,000	$ 7,900,000	$ 8,700,000	$ 9,700,000	$ 8,700,000	$ 8,700,000
Wastewater Transfer to Equipment Replacement Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Expenditures	*$ 5,700,000*	*$ 7,700,000*	*$ 9,900,000*	*$ 9,900,000*	*$ 12,700,000*	*$ 8,700,000*	*$ 8,700,000*	*$ 7,900,000*	*$ 8,700,000*	*$ 9,700,000*	*$ 8,700,000*	*$ 8,700,000*
Add Net Surplus/Deficit	*$ (1,850,781)*	*$ 200,845*	*$ (922,848)*	*$ 1,061,953*	*$ (363,485)*	*$ 3,322,613*	*$ 3,942,761*	*$ 3,698,700*	*$ 3,559,270*	*$ 3,156,535*	*$ 3,179,913*	*$ 2,225,723*
CROSS REVENUE REQUIREMENTS												
O&M	$ 24,323,527	$ 23,653,392	$ 23,394,671	$ 24,051,589	$ 24,812,101	$ 25,557,115	$ 26,327,481	$ 27,124,165	$ 27,947,961	$ 28,800,000	$ 29,681,251	$ 30,592,770
Capital	$ 5,700,000	$ 7,700,000	$ 9,900,000	$ 9,900,000	$ 12,700,000	$ 8,700,000	$ 8,700,000	$ 7,900,000	$ 8,700,000	$ 9,700,000	$ 8,700,000	$ 8,700,000
Operating Surplus/Deficit	$ (1,850,781)	$ 200,845	$ (922,848)	$ 1,061,953	$ (363,485)	$ 3,322,613	$ 3,942,761	$ 3,698,700	$ 3,559,270	$ 3,156,535	$ 3,179,913	$ 2,225,723
Total Gross Revenue Requirements	*$ 28,172,746*	*$ 30,234,237*	*$ 32,371,823*	*$ 34,613,542*	*$ 36,148,616*	*$ 36,975,728*	*$ 37,970,242*	*$ 38,722,865*	*$ 39,207,231*	*$ 39,956,535*	*$ 40,861,716*	*$ 41,678,492*
OPERATING PERFORMANCE												
Ending Operating Reserve Balance	$ 5,307,252	$ 5,508,097	$ 5,015,249	$ 6,077,202	$ 5,713,716	$ 17,696,341	$ 21,639,102	$ 24,847,672	$ 28,106,991	$ 31,263,665	$ 34,423,583	$ 36,949,252
Target Operating Reserve Balance	$ 6,080,907	$ 5,913,348	$ 5,848,668	$ 6,012,892	$ 6,203,025	$ 6,389,276	$ 6,581,970	$ 6,781,029	$ 6,986,990	$ 7,200,000	$ 7,420,313	$ 7,648,193
Variance From Target	$ (773,656)	$ (405,251)	$ (833,419)	$ 64,310	$ (489,309)	$ 11,307,065	$ 14,957,132	$ 18,066,643	$ 21,120,001	$ 24,063,665	$ 27,003,270	$ 29,301,059
Conservation Fund Ending Balance	$ 204,324	$ 74,024	$ 307,753	$ 18,573	$ 268,044	$ 91,116	$ 150,719	$ 86,993	$ 206,357	$ 292,002	$ 3,916	$ (6,720)
Stand Alone DSCR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

4. WATER UTILITY COST OF SERVICE STUDY

Following the determination of the water utility financial plan, the next steps are to summarize the water utilities total rate revenue requirement, determine the proportion of that requirement which is attributable to each customer class, and calculate the volumetric and fixed rates.

4.1 WATER REVENUE REQUIREMENT FROM RATES

Table 27 below indicates the level of water utility expenditures which must be recovered from rates in the FY 2015 test year and each year of the forecast period. It is comprised of the forecast water utility O&M and capital expenditures, and is offset by non-rate revenues the water utility is anticipated to receive over the forecast period. The total test year revenue requirement is approximately $34 Million.

TABLE 27: WATER REVENUE REQUIREMENTS

OPERATION AND MAINTENANCE EXPENDITURES												
Revenue/Expense Item	Budget Year FY2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Dept 536.1000 Utilities - Water Administration	$ 7,492,304	$ 7,718,511	$ 7,945,452	$ 8,179,197	$ 8,419,955	$ 8,667,940	$ 8,923,374	$ 9,186,466	$ 9,457,512	$ 9,736,685	$ 10,024,268	$ 10,320,548
Total Dept 536.2060 Utilities - Water Cross Connection Pr	$ 104,509	$ 108,204	$ 112,037	$ 116,015	$ 120,142	$ 24,436	$ 128,872	$ 133,488	$ 138,279	$ 143,254	$ 148,119	$ 153,782
Total Dept 540.1000 Water Service Center Management	$ 1,223,240	$ 1,244,890	$ 1,284,276	$ 1,324,940	$ 1,366,925	$ 1,410,276	$ 1,455,037	$ 1,501,257	$ 1,548,986	$ 1,598,273	$ 1,649,172	$ 1,701,738
Total Dept 540.3000 WSC - Capital improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 540.2000 Wsc-Meter Reading - Water	$ 730,577	$ 533,281	$ 551,623	$ 570,642	$ 590,360	$ 610,779	$ 631,957	$ 653,913	$ 676,677	$ 700,281	$ 724,799	$ 750,145
Total Dept 540.2020 Wsc-Water Distribution Mains	$ 3,250,559	$ 3,898,236	$ 3,824,449	$ 3,955,207	$ 4,090,691	$ 4,231,081	$ 4,376,566	$ 4,527,344	$ 4,683,618	$ 4,845,604	$ 5,013,523	$ 5,187,608
Total Dept 545.2000 Water Plant - Operations	$ 21,645,150	$ 5,420,000	$ 5,000,004	$ 6,200,105	$ 6,402,000	$ 6,670,000	$ 6,035,922	$ 7,000,291	$ 7,277,975	$ 7,495,215	$ 7,720,102	$ 7,950,729
Total Dept 545.2010 Water Plant Maintenance	$ 1,288,821	$ 1,629,451	$ 1,684,113	$ 1,740,751	$ 1,799,361	$ 1,860,043	$ 1,922,875	$ 1,987,937	$ 2,055,313	$ 2,125,091	$ 2,197,362	$ 2,272,219
Total Dept 545.2020 Water Plant - Dam Operations	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 545.2030 Water Plant - Dam Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 545.3000 Water Plant - Capital improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 966.101-Transfers out to fund 101	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000
Total Operation and Maintenance Expenditures	$ 36,865,206	$ 21,483,441	$ 22,140,012	$ 23,316,457	$ 23,393,504	$ 24,705,148	$ 25,434,603	$ 26,188,715	$ 26,968,360	$ 27,774,446	$ 28,607,324	$ 29,463,768
CAPITAL EXPENDITURES												
Revenue/Expense Item	Budget Year FY2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Grand Total Existing and Proposed Debt Service	$ 2,747,946	$ 2,742,821	$ 2,746,428	$ 9,648,446	$ 9,644,008	$ 9,643,196	$ 9,639,827	$ 9,192,721	$ 8,676,674	$ 8,085,628	$ 8,423,746	$ 6,904,000
Water Rate Revenue Financing (Cash)	$ 7,000,000	$ 9,000,000	$ 8,900,000	$ 6,900,000	$ 6,000,000	$ 6,800,000	$ 7,800,000	$ 7,800,000	$ 7,800,000	$ 8,000,000	$ 8,800,000	$ 8,800,000
Add Net Operating Surplus/(Deficit)	$ (2,752,778)	$ 2,087,727	$ 3,865,883	$ (791,543)	$ 163,465	$ 25,662	$ (897,311)	$ (83,835)	$ 492,328	$ 634,593	$ (166,883)	$ 1,390,788
Add Water Transfers to Equipment Replacement Fu	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Expenditures	$ 6,995,168	$ 13,830,548	$ 14,512,315	$ 15,756,903	$ 15,807,474	$ 16,268,858	$ 16,542,517	$ 16,908,886	$ 16,969,002	$ 16,720,187	$ 16,057,077	$ 16,590,788
GROSS REVENUE REQUIREMENT FROM RATES	$ 43,860,374	$ 35,313,989	$ 37,052,328	$ 38,073,361	$ 39,806,978	$ 40,974,006	$ 41,977,120	$ 42,797,601	$ 43,937,362	$ 44,494,633	$ 45,365,002	$ 46,260,556
NON-RATE REVENUES												
Revenue/Expense Item	Budget Year FY2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Non-Rate Revenues	$ 886,000	$ 913,314	$ 931,644	$ 927,686	$ 928,503	$ 929,131	$ 931,145	$ 930,726	$ 933,187	$ 936,360	$ 935,527	$ 942,481
NET REVENUE REQUIREMENT FROM RATES	$ 42,974,374	$ 34,400,675	$ 36,120,685	$ 37,146,075	$ 38,878,475	$ 40,044,875	$ 41,045,975	$ 41,866,875	$ 42,704,175	$ 43,558,275	$ 44,429,475	$ 45,318,075

4.2 WATER REVENUE REQUIREMENTS BY CUSTOMER CLASS

Following the development of the total test year revenue requirement, the proportion of the total revenue requirement allocable to each customer class must be determined. This allocation represents the level of revenues that must be recovered from each customer class, given the operational demands that class places on the water utility system. This allocation is performed via the multi-step process described below.

4.2.1 O&M Allocation to Function Categories

The first step in determining revenue requirements by customer class is to allocate the test year O&M revenue requirement to functional categories. These categories are functions that the water utility must perform in order to deliver water service to City customers. For the water utility they are: Administrative and General, Customer Service, Source of Supply, Pumping, Treatment, Storage, Transmission Mains, Distribution Mains, Meters and Services and Hydrants.
The O&M allocations, by department, are shown in Table 28 on the following page.

TABLE 28: WATER O&M ALLOCATION TO FUNCTIONAL CATEGORIES

DEPARTMENT	Total $ Allocation	Administrative and General	Customer Service	Source of Supply	Pumping	Treatment	Storage	Transmission Mains	Distribution Mains	Meters and Services	Hydrants
Total Dept 535.100-Utilities - Water Administration	$ 7,718,511	$ 7,718,511	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 535.205-Utilities - Water Cross Connection P	$ 108,204	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 108,204	$ -	$ -
Total Dept 510.100-Water Service Center Management	$ 1,244,890	$ -	$ 1,244,890	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 510.300-WSC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 510.200-Water Meter Reading - Water	$ 630,281	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 630,281	$ -
Total Dept 510.202-Water Water Distribution Mains	$ 3,888,236	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,888,236	$ -	$ -
Total Dept 515.200-Water Plant - Operations	$ 5,420,888	$ -	$ -	$ -	$ -	$ 5,420,888	$ -	$ -	$ -	$ -	$ -
Total Dept 515.201-Water Plant Maintenance	$ 1,629,451	$ -	$ -	$ -	$ -	$ 1,629,451	$ -	$ -	$ -	$ -	$ -
Total Dept 515.202-Water Plant - Non Operations	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 515.203-Water Plant - Non Maintenance	$	$	$	$	$	$	$	$	$	$	$
Total Dept 515.300-Water Plant - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 965.10 - Transfers out to Fund 101	$ 1,130,000	$ 1,130,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GRAND TOTAL WATER UTILITY	$ 21,483,441	$ 8,848,511	$ 1,244,890	$ -	$ -	$ 7,050,339	$ -	$ -	$ 3,996,440	$ 630,281	$ -

4.2.2 O&M Allocation to Cost Components

Once O&M costs have been allocated to functional categories, the total O&M revenue requirement allocated to each functional category must be further allocated based on the operational need that function is designed to fulfill. For this allocation RFC has utilized the "Base Extra Capacity" method described in the American Water Works Association ("AWWA") publication, "Manual of Water Supply Practices M1, Principles of Rates, Fees and Charges (M1)."

The cost components utilized in this study are: base demand, or water demand under average conditions; maximum day and hour demand, or water demand under peak load conditions; customer service, for functions related to customer billing and service; and fire protection, for functions pertaining to the use of public hydrants and private fire lines. Table 29 below indicates the classification of water O&M expenditures to the cost components described above.

TABLE 29: WATER O&M ALLOCATION TO COST COMPONENTS

		$ Allocation							
		Base	Max Day Extra	Max Hour Extra	Customer Units Equivalent Meters		Fire Protection Private Fire		Public Fire
FUNCTIONAL CLASSIFICATION	Total $ Allocation	Demand	Capacity	Capacity	& Services	Bills	Equivalent Connections	Bills	Hydrants
Administrative and General	$ 8,848,611	$ 2,791,451	$ 4,461,013	$ 380,496	$ 1,215,291	$ -	$ -	$ -	$ -
Customer Service	$ 1,244,080	$ -	$ -	$ -	$ 1,244,080	$ -	$ -	$ -	$ -
Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Pumping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Treatment	$ 7,090,319	$ 2,717,572	$ 4,372,747	$ -	$ -	$ -	$ -	$ -	$ -
Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Transmission Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Distribution Mains	$ 3,806,441	$ 1,288,813	$ 2,002,996	$ 514,631	$ -	$ -	$ -	$ -	$ -
Meters and Services	$ 633,281	$ -	$ -	$ -	$ 633,281	$ -	$ -	$ -	$ -
Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ 21,483,441	$ 6,778,137	$ 10,836,756	$ 895,127	$ 3,092,652	$ -	$ -	$ -	$ -

4.2.3 Capital Cost Allocation to Functional Components

Similar to the allocation of the O&M revenue requirement described in the previous section, the capital revenue requirement must be allocated to functional categories. Table 30 on the following page indicates the functional allocation of capital costs.

The basis for the allocation of capital costs was the existing level of water utility investment in fixed assets. The existing net book value of each major asset class was allocated to the functional categories. The total capital revenue requirement, approximately 14 Million in the test year, was then allocated according to the proportion of existing investment in each functional category. As indicated, a large proportion of investment in fixed assets pertains to upgrades to the City's water treatment plant. As such, the majority of the capital revenue requirement (68%) has been allocated to the treatment function.

TABLE 30: WATER CAPITAL ALLOCATION TO FUNCTIONAL CATEGORIES

Allocation of Capital Costs to Functional Categories

	Total	Administrative and General	Customer Service	Source of Supply	Pumping	Treatment	Storage	Transmission Mains	Distribution Mains	Meters and Services	Hydrants
Breakdown of Fixed Assets by Functional Category	100%	0.21%	0.00%	9.53%	0.48%	68.39%	0.00%	0.00%	19.26%	2.09%	0.04%
Total Capital Expenditures	$ 13,830,548	$ 29,611	$ -	$ 1,317,605	$ 66,010	$ 9,458,192	$ -	$ -	$ 2,663,837	$ 289,678	$ 5,613

$ Allocation of Water Fixed Assets to Functional Categories

FIXED ASSET CATEGORY	Net Book value	Administrative and General	Customer Service	Source of Supply	Pumping	Treatment	Storage	Transmission Mains	Distribution Mains	Meters and Services	Hydrants
01 Land	$ 724,317	$ 73,998	$ -	$ 60,947	$ 6,339	$ 34,939	$ -	$ -	$ 5,090	$ -	$ -
02 Construction in Progress	$ 755,881	$ 1,618	$ -	$ 71,992	$ 3,637	$ 516,782	$ -	$ -	$ 145,548	$ 15,828	$ 307
20 land improvement	$ 199,888	$ 425	$ -	$ 18,929	$ 948	$ 135,875	$ -	$ -	$ 38,268	$ 4,161	$ 81
21 Building Improvements	$ 7464,810	$ 7,418	$ -	$ 390,084	$ 16,579	$ 2,269,448	$ -	$ -	$ 867,209	$ 72,571	$ 1,406
23 Dist Plant - Hydrants	$ 16,458	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,458
24 Dist Plant - Water mains	$ 7175,835	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,175,835	$ -	$ -
25 Dist Plant - Meters	$ 849,348	$	$	$	$	$	$	$	$	$ 849,348	$
26 Dist - Struc & Improv	$ 629,696	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 629,696	$ -	$ -
27 Lab Equip	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
200 Office Equip & Furn.	$ 12,023	$ 12,023	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
29 power operated equip.	$ 6,000	$ 13	$ -	$ 572	$ 29	$ 4,103	$ -	$ -	$ 1,195	$ 126	$ 2
31 Pump Plant (Electric Pump Equip)	$ 120,531	$ -	$ -	$ -	$ 120,531	$ -	$ -	$ -	$ -	$ -	$ -
32 Pump Plant - Struc & Imp	$ 66,574	$ -	$ -	$ -	$ 66,574	$ -	$ -	$ -	$ -	$ -	$ -
33 Source of Supplies - Main (Pipe Line)	$ 2475,415	$ -	$ -	$ 2,475,415	$ -	$ -	$ -	$ -	$ -	$ -	$ -
34 Source of Water Supplies - Structure	$ 780,912	$ -	$ -	$ 780,912	$ -	$ -	$ -	$ -	$ -	$ -	$ -
35 Tools Cars, & Garage Eq	$ 3,080	$ 7	$ -	$ 293	$ 15	$ 2,107	$ -	$ -	$ 599	$ 65	$ 1
36 Vehicle	$ 348,753	$ 747	$ -	$ 33,225	$ 1,655	$ 238,499	$ -	$ -	$ 67,172	$ 7,305	$ 142
37 Treatment - Struc & Impr	$ 384,545	$ -	$ -	$ -	$ -	$ 384,545	$ -	$ -	$ -	$ -	$ -
38 Treatment Plant Equip	$ 115,892	$ -	$ -	$ -	$ -	$ 115,892	$ -	$ -	$ -	$ -	$ -
DWRLF Phase 1/Seg 1 Total	$ 3976,530	$ -	$ -	$ -	$ -	$ 3,976,530	$ -	$ -	$ -	$ -	$ -
DWRLF Phase 1/Seg 2 Total	$ 4366,011	$ -	$ -	$ -	$ -	$ 4,366,011	$ -	$ -	$ -	$ -	$ -
DWRLF Phase 1/Seg 3 Total	$ 4388,566	$ -	$ -	$ -	$ -	$ 4,388,566	$ -	$ -	$ -	$ -	$ -
DWRLF Phase 1/Seg 4 Total	$ 7579,456	$ -	$ -	$ -	$ -	$ 7,579,456	$ -	$ -	$ -	$ -	$ -
DWRLF Phase 1/Seg 5 Total	$ 6885,886	$ -	$ -	$ -	$ -	$ 6,885,886	$ -	$ -	$ -	$ -	$ -
Total Water Fixed assets	$ 45338,750	$ 97,049	$ -	$ 4,318,369	$ 216,340	$ 30,998,634	$ -	$ -	$ 8,730,557	$ 949,401	$ 18,397
%Breakdown	100.00%	0.21%	0.00%	9.53%	0.48%	68.39%	0.00%	0.00%	19.26%	2.09%	0.04%

4.2.4 Capital Cost Allocation to Cost Components

As with the allocation of the O&M revenue requirement described above, the functionally allocated capital revenue requirement must also be allocated according to the operational need for which each function is designed to fulfill.

The "Base Extra Capacity" method described in AWWA M1 is also used to allocate the capital revenue requirement to cost components. Table 31 below summarizes this allocation.

TABLE 31: WATER CAPITAL ALLOCATION TO COST COMPONENTS

		$ Allocation								
		Base	Max Day Extra	Max Hour Extra	Customer Units Equivalent Meters		Fire Protection Private Fire		Public Fire
FUNCTIONAL CLASSIFICATION	Total $ Allocation	Demand	Capacity	Capacity	& Services	Bills	Equivalent Connections	Bills	Hydrants
Administrative and General	21,811	-	-	-	20611	-	-	-	-
Customer Service	-	-	-	-	-	-	-	-	-
Source of Supply	1,317,805	1,317,805	-	-	-	-	-	-	-
Pumping	65,010	25,444	40,566	-	-	-	-	-	-
Treatment	9,453,193	3,640,697	5,812,497	-	-	-	-	-	-
Storage	-	-	-	-	-	-	-	-	-
Transmission Mains	-	-	-	-	-	-	-	-	-
Distribution Mains	2,683,887	887,946	1,415,891	380,200	-	-	-	-	-
Meters and Services	289,678	-	-	-	289678	-	-	-	-
Hydrants	50,013	50,013	-	-	-	-	-	-	-
Total Capital Expenditures	13,830,598	5,882,905	7,268,954	380,200	310288	-	-	-	-

4.2.5 Non-Rate Revenue Allocation to Cost Components

Non-rate revenue must be excluded from the O&M and Capital revenue requirements as these amounts are an offset to the revenue requirement which will be recovered from rates. Consequently, non-rate revenues are allocated to the cost components so that they can be removed from the total revenue requirement. In this case, non-rate revenues were allocated proportionally according to the total O&M revenue requirement allocation and can be seen in Table 32 on the below.

TABLE 32: WATER NON-RATE REVENUE ALLOCATION TO COST COMPONENTS

			$ Allocation							
			Base	Max Day Extra	Max Hour Extra	Customer Units Equivalent Meters		Fire Protection Private Fire		Public Fire
ACCOUNT CODE	DESCRIPTION	Total $ Allocation	Demand	Capacity	Capacity	& Services	Bills	Equivalent Connections	Bills	Hydrants
591636.100615000	Fees - Utilities - Bike Regn	-	-	-	-	-	-	-	-	-
591636.100642000	Charges For Sale	-	-	-	-	-	-	-	-	-
591636.100648000	Scrap Sales	6,000	1,578	2,616	204	704				
591636.100657000	Fines - Turn On Fees - Utilities	120,000	31,561	60,353	4,888	16,888	-	-	-	-
591636.100657100	Forfeited Discount - Utilities	380,000	110,427	146,088	14,258	49,257	-	-	-	-
591636.100665000	Interest Earned On Bank Chg &	27,314	8,618	13,740	1,113	3844	-	-	-	-
591636.100670000	Rental - City Property	-	-	-	-	-	-	-	-	-
591636.100673400	Sale Of Fixed Assets	25,000	7,888	12,576	1,018	3518				
591636.100696000	Discounts Earned	-	-	-	-	-	-	-	-	-
591636.100697000	Prior Year Revenue	-	-	-	-	-	-	-	-	-
591640.100643000	Meter Water Sales									
591640.100648000	Scrap Sales	-	-	-	-	-	-	-	-	-
591640.100670000	Rental - City Property	-	-	-	-	-	-	-	-	-
591640.100697000	Reimbursements	-	-	-	-	-	-	-	-	-
591640.206801900	Machine & Job Charge Service	180,000	47,341	85,454	11,100	31,111	-	-	-	-
591640.206842000	Charges For Sale									
591640.206801900	Machine & Job Charge Service	236,000	74,459	118,714	9,614	33213	-	-	-	-
591645.200615000	Fees - Water testing - Utilities	-	-	-	-	-	-	-	-	-
591645.200642000	Charges For Sale	-	-	-	-	-	-	-	-	-
591645.200648000	Scrap Sales	-	-	-	-	-	-	-	-	-
591645.200671300	Other Income									
591645.200697000	Reimbursements	-	-	-	-	-	-	-	-	-
591645.200696000	Discounts Earned	-	-	-	-	-	-	-	-	-
Add Transfers in from General Fund		-	-	-	-	-	-	-	-	-
Total Non-Rate Revenues		910,314	200,155	439,419	37,205	120,535	-	-	-	-

4.2.6 Determination of Maximum Day and Hour Peaking Factors

Once each component of the revenue requirements has been determined, maximum day and hour peaking factors for each customer class are estimated. These are the basis upon which the maximum day and hour cost allocations, determined in the previous step, are allocated to each customer class. In general, the guidelines for determining maximum day and hour peaking factors outlined in AWWA M1 were the basis for this component of the analysis.

The maximum day demand for each customer class is estimated as the average usage per day in the highest usage month, divided by the annual average usage per day, weighted by the ratio of maximum day demand to the average demand in the maximum month for the entire water system. In other words:

- System Max Day to Average Day in Max Month=(System Max Day Demand)/(System Max Month/30)
- Class Maximum Day=[(Class Max Month/30)/(Class Annual Total)/365]*[System Max Day to Average Day in Max Month]

The weighting occurs because the exact maximum day, by customer class is not known, but is assumed to have the same relationship to the average day in the maximum month as the entire system. As the exact customer class maximum hour is not known, a similar weighting process occurs to determine the customer class maximum hour demands:

- System Max Hour to Average Day in Max Month=(System Max Hour)/(System Max Month/30)
- Class Maximum Hour=Class Max Day*System Max Hour to Average Day in Max Month

The determination of customer class peaking factors is shown in Table 33 on the below.

TABLE 33: WATER PEAKING FACTOR CALCULATIONS

System Production Metrics

	Annual Total	System Annual Average Day	System Max Month	Average Day in Max Month	System Max Day	System Max Day to Average Day	System Max Day to Average Day in Max Month	System Max Hour Peak (Estimated)	System Max Hour	System Max Hour to Average Day	System Max Hour to Average Day in Max Month
Tot System	3,485,892	9,550	425,416	14,214	24,771	2.59	1.74	500	28,651	3.00	2.02

Determination of Customer Class Peaking Factors

Customer Class	Annual Total	Max Month	Max Day in Max Month	Annual Average Day	Max to Average Day Ratio	System Max to Average Day	Max Day Peaking Factor	System Max Hour to Average Day	Max Hour Peaking Factor
INSIDE CITY SERVICE									
Tot Inside City Residential	2,882,952	227,019	7,301	6,783	1.08	1.75	2.52	1.95	4.57
Tot Inside City Commercial/Industrial	568,578	88,367	5,686	1,586	3.59	1.75	2.63	1.95	5.24
Tot Inside City Lawn	13,008	5,105	170	37	4.64	1.75	4.15	1.95	15.00
Tot Inside City	3,440,210	424,474	14,149	9,490	1.50	1.75	2.62	1.95	5.11
OUTSIDE CITY SERVICE									
Tot Outside City Residential	8,630	1,216	41	24	1.71	1.75	3.00	1.95	5.85
Tot Outside City Commercial/Industrial	27,243	4,257	142	77	1.85	1.75	3.24	1.95	6.33
Tot Outside City Lawn	-	-	-	-		1.75		1.95	
Tot Outside City	36,873	4,864	162	100	1.62	1.75	2.83	1.95	5.52
Tot System	3,485,892	425,416	14,214	9,590	1.49				

4.2.7 Calculation of Units of Service

The next step in the cost allocation process is to summarize the units of service, which are the basis for the allocation of the total revenue requirement to each of the customer classes. The units are Base units, Maximum Day Extra Capacity units, Maximum Hour Extra Capacity units, Customer units and Direct Fire Protection Units and are indicated in Table 34 on the following page.

Base units are the annual usage for each customer class. Maximum Day Extra Capacity units represent the water demand in excess of that which is used on an average day for that customer class, and is a function of the average daily usage and the customer class peaking factor determined in the prior step.

As an example, the residential class is forecast to use 1.7 Million CCF on an annual basis in the test year. This equates to 4,700 CCF/day on an average day. Based on the maximum day peaking factor determined in the previous step, Residential customers, on their highest usage day of the year, typically use 1.7 times their average day usage, or around 8,200 CCF. The difference between the maximum day and average day, around 3,500 CCF, represents the Maximum Day Extra Capacity units.

A similar calculation is used to determine the Maximum Hour Extra Capacity Units, which are simply the usage forecast in the highest hour of the test year, less the maximum day demand.

Customer Units are equivalent meters, and customer monthly bills. The number of bills for each customer class was ascertained via an examination of the billing data from the City's Customer Information System ("CIS"). The equivalent meters are the number of customer meters at each meter size weighted by the potential water demand each meter can place on the water system.

Private fire connections and hydrants were not included as the City does not currently bill separately for public or private fire protection.

TABLE 34: WATER UNITS OF SERVICE

Water Units of Service	Base Units		Maximum Day Extra Capacity Units			Maximum Hour Extra Capacity Units			Customer Units		Direct Fire Protection	
CUSTOMER CLASS	Forecast Annual Demand CCF	Forecast Average Day Demand	Capacity Factor	Total Capacity	Extra Capacity	Capacity Factor	Total Capacity	Extra Capacity	Equivalent Meters & Services	Bills	Private Fire Equivalent Connections	Public Fire Bills Hydrants
INSIDE CITY RETAIL CONSUMPTION REVENUE												
Total Inside City Residential	1,745,595	4,782	2.52	12,053	7,281	4.92	23,524	11,480	25,621	301,317		
Total Inside City Commercial/Industrial	1,484,239	4,066	2.69	10,932	6,866	5.24	21,317	10,385	8,908	15,210		
Total Inside City Lawn	12,586	34	8.12	280	245	15.83	546	266	138	656		
Total Inside City	3,242,360	8,883		23,275	14,392	26	45,387	22,112	34,669	317,082		
OUTSIDE CITY RETAIL CONSUMPTION REVENUE												
Total Outside City Residential	8,112	22	3.00	67	44	5.85	130	63	128	1,503		
Total Outside City Commercial/Industrial	26,266	72	3.24	233	161	6.33	455	222	166	417		
Total Outside City Lawn	0	0	0.00			0.00						
Total Outside City	34,379	94		300	206	12	585	285	295	1,920		
Grand Total System Units of Service	3,276,738	8,977		23,575	14,598	38	45,972	22,397	34,964	319,002		

4.2.8 Unit Cost of Service

Following the allocation of the water revenue requirements to each of the cost components and the calculation of the units of service, a unit cost of service for each cost component can be determined. These unit costs are basis by which the revenue requirements by customer class are determined. The unit cost of service is the revenue requirement, as allocated to the cost components, divided by the units of service attributable to that component and is shown in Table 35 below.

TABLE 35: WATER UNIT COST OF SERVICE

Water Units of Service								
			Max	Max	Customer Units		Direct Fire Protection	
		Base	Day	Hour			Private Fire	Public Fire
CUSTOMER CLASS		Demand Units	Extra Capacity	Extra Capacity	Equivalent Meters & Services	Bills	Equivalent Connections	Bills	Hydrants
Total Inside City		3,242,350	11,382	22,112	34,669	317,082			
Total Outside City		34,388	206	285	295	1,920			
Grand Total System Units of Service		3,276,738	11,588	22,397	34,964	319,002			
Water Cash Basis Revenue Requirements								
			Max	Max	Customer Units		Direct Fire Protection	
		Base	Day	Hour			Private Fire	Public Fire
REVENUE REQUIREMENT	Total	Demand Units	Extra Capacity	Extra Capacity	Equivalent Meters & Services	Bills	Equivalent Connections	Bills	Hydrants
Total Operation and Maintenance Expenditures	$ 21,493,441	$ 6,178,137	$ 10,806,686	$ 875,157	$ 3,023,462	$ -	$ -	$ -	$ -
Unit Cost	$	$ 2.07	$ 710.28	$ 39.08	$ 86.47	$ -	$ -	$ -	$ -
Total Capital Expenditures	$ 13,000,548	$ 5,802,305	$ 7,208,754	$ 360,200	$ 319,289	$ -	$ -	$ -	$ -
Unit Cost	$	$ 1.80	$ 497.93	$ 16.08	$ 9.13	$ -	$ -	$ -	$ -
Total Non-Rate Revenues	$ (913,314)	$ (288,159)	$ (459,419)	$ (37,209)	$ (128,529)	$ -	$ -	$ -	$ -
Unit Cost	$	$ (0.09)	$ (31.47)	$ (1.66)	$ (3.68)	$ -	$ -	$ -	$ -
Total System Revenue Requirements	$ 34,400,675	$ 12,192,283	$ 17,616,021	$ 1,198,152	$ 3,214,216	$ -	$ -	$ -	$ -
Total System Unit COS	$ -	$ 3.73	$ 1,206.74	$ 53.50	$ 91.93	$ -	$ -	$ -	$ -

For example, total base demand units are 3.2 Million CCF. This means that the O&M, Capital and Non-Rate Revenue Requirements cost $2.07, $1.80 and $(.09) per unit of base water demand. The total unit cost to serve base water demand is $3.78/CCF. The calculation is repeated for each cost component to determine the overall unit cost to serve base demand, extra capacity demand (max day and hour) and provide customer service.

4.2.9 Revenue Requirements by Customer Class

The customer class revenue requirements are the basis for establishing alternative rates by customer class. The City's existing rate structure does not include distinct rates by customer class. At this time the City will not be implementing any rate structure changes. However, the distinct class revenue requirements are shown in Table 36 below and are the basis for the alternative rates by customer class presented as Appendix A.

TABLE 36: WATER REVENUE REQUIREMENTS BY CUSTOMER CLASS

Water Units of Service CUSTOMER CLASS		Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Customer Units Equivalent Meters & Services	Bills	Direct Fire Protection Private Fire Equivalent Fire Connections	Fire Bills	Public Fire Hydrants
Total System Revenue Requirements	$34,400,875	$12,302,286	$17,615,021	$1,198,152	$ 3214,216	$	$	$	$
Total System Unit COS		$ 378	$ 1,206 74	$ 53 45	$ 91 93	$ -	$ -	$ -	$ -
Units of Service									
Total Inside City Residential		1745,505	7,201	11,400	25,021	301,317	-	-	-
Total Inside City Commercial/Industrial		1,484,289	5,866	10,366	8,909	16,210			
Total Inside City Lawn		12,886	245	266	108	566	-	-	-
Total Inside City		3242,360	14,382	22,112	34,039	317,002	-	-	-
Total Outside City Residential		8,112	44	63	129	1,503	-	-	-
Total Outside City Commercial/Industrial		28,206	161	222	166	417	-	-	-
Total Outside City Lawn									
Total Outside City		34,379	206	286	295	1,900	-	-	-
Total System Units of Service		3276,738	14,588	22,397	34,334	319,002			
Allocated Cost of Service									
Total Inside City Residential COS	$ 18,346,872	$ 6,590,778	$ 8,785,440	$ 613,089	$ 2,955,395	$ -	$ -	$ -	$ -
Total Inside City Commercial/Industrial COS	$ 15,203,704	$ 5,604,100	$ 8,204,911	$ 555,005	$ 819,020	$ -	$ -	$ -	$ -
Total Inside City Lawn COS	$ 370,545	$ 97,621	$ 235,186	$ 14,256	$ 12,714	$	$	$	$
Total Inside City COS	$ 33,980,022	$ 12,242,479	$ 17,397,536	$ 1,182,900	$ 3,187,107	$ -	$ -	$ -	$ -
Total Outside City Residential COS	$ 99,453	$ 30,830	$ 63,642	$ 3,889	$ 11,823	$	$	$	
Total Outside City Commercial/Industrial COS	$ 321,169	$ 99,177	$ 194,843	$ 11,863	$ 15,286	$ -	$ -	$ -	$ -
Total Outside City Lawn COS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Outside City COS	$ 420,653	$ 129,807	$ 258,486	$ 15,752	$ 27,109	$	$	$	
Total System Cost of Service	$ 34,400,675	$ 12,372,286	$ 17,615,021	$ 1,198,152	$ 3214,216	$ -	$ -	$ -	$ -
Check on Total System COS (Should be $0)	$ -								

As Table 36 indicates, the revenue requirement for each customer class is the total unit cost of service determined previously, multiplied by the units of service for each customer class. The total allocation is based on each customer class's contribution to the water utility's overall operating and capital costs, as represented by their units of service.

4.3 WATER RATE DESIGN

As mentioned previously, the water rates have been calculated under the City's existing rate structure. The rate calculation under existing rates will be presented here, with the alternative rates by customer class presented as Appendix A for informational purposes.

4.3.1 Volumetric Rate Calculations

As mentioned above, the City did not indicate a desire to significantly modify its water rate structure at this time. Therefore RFC maintained various components of the existing water volumetric rates including:

- The existing inside/outside city differential (i.e. outside=150% of inside)
- The existing steepness or difference between the highest, middle and lowest block rates
- The existing structure which charges the same volumetric rates for all customer classes
- The existing shift of some volumetric costs to the fixed service charge (i.e. a readiness to serve adjustment)

The calculation of the water volumetric rates involves the following steps

- Determine total composite volumetric revenue requirement:

    - Adjust the test-year volumetric revenue requirement (i.e. Base, Max Day and Max Hour costs) by the readiness to serve amount
    - Allocate the adjusted volumetric revenue requirement to the three consumption blocks
    - Add the block allocation for inside and outside city customers to determine a composite volumetric revenue requirement for all customer classes
- Determine the composite water volumetric units:
    - Multiply the consumption, by block, for inside and outside city customers, by their respective differentials (Outside=150% of Inside).
    - Add those units together.
- Calculate Inside and Outside City Volumetric Rates:
    - Determine a composite rate, for each block, for all customer classes:
        - Multiply the composite consumption for each block by the proposed steepness for that block and sum the result
        - For the lowest block divide the total composite revenue requirement by the total determined above.
        - For Blocks 2 and 3 multiply the Block 1 rate by the proposed steepness for Blocks 2 and 3.
    - Multiply the composite rates, by block determined above, by the outside and inside city differentials to determine the block rates for inside and outside city customers.

A summary of the water volumetric rate calculations are indicated in Table 37 below.

TABLE 37: WATER VOLUMETRIC RATE CALCULATIONS

	Total Cost Components by CC			% Allocation of Costs to Blocks			Allocation of Cost Components to Blocks			Test Year	I/O Differential			Block Rate Calculations				
	Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Consumption By Block CCF	Test Year Differential Times Inside City	Test Year Adjusted Consumption CCF	Test Year Composite Consumption CCF	Test Year Proposed Steepness	Existing Rates	Test Year FY 2015 Proposed Block Rates	Difference $	Difference %
EXISTING RATE DESIGN																		
Total Inside City COS	$ 12,212,479	$ 17,367,556	$ 1,132,900															
RCS Adjustment	$ (6,305,322)	$ -	$ -															
Adjusted Inside City COS	$ 5,887,157	$ 17,367,556	$ 1,132,900															
Total Inside City All Classes																		
Inside City Block 1				100%	85%	90%	$ 5,887,157	$ 14,762,05	$ 991,410	1,743,119	1.000	1,743,119	1,699,910	1.30	$ 7.52	$ 7.92	$ 0.40	5%
Inside City Block 2					15%	5%	$ -	$ 2,605,00	$ 99,145	956,438	1.000	956,438	972,173	1.25	$ 7.31	$ 7.62	$ 0.31	4%
Inside City Block 3				0%	0%	5%	$ -	$ -	$ 532,305	542,809	1.000	542,809	562,865	1.00	$ 5.73	$ 6.03	$ 0.30	5%
				100%	100%	100%	$ 5,887,157	$ 17,367,596	$ 1,182,900	3,242,360		3,242,360	3,299,988					
Total Outside City COS	$ 139,805	$ 218,455	$ 15,252															
RCS Adjustment	$ (54,140)	$ -	$ -															
Adjusted Ouside City COS	$ 85,665	$ 218,455	$ 15,252															
Total Outside City All Classes																		
Outside City Block 1				100%	85%	90%	$ 75,664	$ 211,212	$ 7,626	10,527	1.500	15,791		1.30	$ 11.25	$ 11.88	$ 0.62	6%
Outside City Block 2					15%	5%	$ -	$ 37,273	$ 763	10,490	1.500	15,735		1.25	$ 10.77	$ 11.42	$ 0.66	6%
Outside City Block 3				0%	0%	5%	$ -	$ -	$ 6,863	13,361	1.500	20,042		1.00	$ 8.68	$ 9.14	$ 0.46	5%
				100%	100%	100%	$ 75,664	$ 248,485	$ 15,252	34,379		51,568						
Total System																		

4.3.2 Fixed Charge Calculations

As noted above, the City did not express a desire to change rate structures at this time. Consequently, the following aspects of the existing rate structure have been maintained including:

- The existing inside/outside city differential (i.e. outside=150% of inside)
- The existing shift of some volumetric costs to the fixed service charge (i.e. a readiness to serve adjustment)
- The flow equivalencies for the various meter sizes

The calculation of the water fixed charges involves the following steps

- Determine total composite fixed charge revenue requirement by summing the fixed charge revenue requirements (i.e. those allocated to the customer service related cost components) and the readiness to serve revenue requirement
- Determine the composite fixed charge water units:
    - Multiply the number of inside and outside city equivalent accounts by the existing I/O differential (Outside=150% of Inside)
    - Add those units together to determine the composite number of equivalent customer accounts
- Calculate Inside and Outside City Volumetric Rates:
    - Determine an annual composite rate for all customer classes by dividing the total composite revenue requirement determined above, by the total composite water equivalent accounts
    - Determine a monthly rate for the 5/8" equivalent account by dividing the annual rate by 12.
    - Multiply the composite fixed charges by the Inside and Outside City differentials (100% for Inside City and 150% for Outside City) to determine the monthly fixed charge per 5/8" equivalent account for inside and outside city customer classes.
    - Multiply the monthly fixed charge for a 5/8" equivalent account by the meter equivalencies for each meter size to determine the monthly fixed charge for the remaining meter sizes.

The fixed charge calculations are shown in Table 38 on the following page.

TABLE 38: WATER FIXED CHARGE CALCULATIONS

CHARGE	Total Revenue Requirements By Charge	Composite Revenue Requirements	Equivalent Accounts	Test Year Differential ___Times Inside City	Test Year Adjusted Equivalent Accounts	Test Year Composite Equivalent Accounts	Monthly Fixed Charge Per 5/8" Equivalent
Tab: Inside City Residential	$ 1,089,624	$ 1,084,955	25,621	1.00	25,621	25,814	$ 2.29
Tab: Inside City Commercial/Industrial	$ 2,462,905	$ 2,586,722	9,045	1.00	9,045	9,297	$ 22.76
	$ 3,552,529	$ 3,671,677	34,666		34,666	35,111	
Tab: Outside City Residential	$ 35,435		125	1.50	193		$ 34.36
Tab: Outside City Commercial/Industrial	$ 5,817		18	1.50	27		$ 34.13
	41,252		29		42		

CUSTOMER CLASS	Inside City Meter Equivalency	Outside Meter Equivalency	Proposed Fixed Charge INSIDE CITY	Existing Fixed Charge INSIDE CITY	Difference	Proposed Fixed Charge OUTSIDE CITY	Existing Fixed Charge OUTSIDE CITY	Difference
Residential Customers								
5/8"	1.00	0.00	$ 22.00	$ 21.76	5%	$ 34.17	$ 32.48	5%
3/4"	1.50	1.50	$ 44.00	$ 41.85	5%	$ 66.95	$ 63.71	5%
1"	2.50	2.50	$ 55.15	$ 52.52	5%	$ 87.08	$ 82.79	5%
1-1/2"	2.50	2.50	$ 55.15	$ 52.52	5%	$ 87.08	$ 82.79	5%
2"	2.50	2.50	$ 55.15	$ 52.52	5%	$ 87.08	$ 82.79	5%
Commercial/Industrial Customers								
5/8"	2.45	2.45	$ 54.05	$ 51.48	4%	$ 83.14	$ 81.14	4%
3/4"	2.81	2.81	$ 64.02	$ 61.26	4%	$ 95.84	$ 91.72	4%
1"	3.45	3.45	$ 78.46	$ 75.10	4%	$ 117.14	$ 112.37	4%
1-1/2"	4.05	4.05	$ 92.80	$ 88.78	4%	$ 138.06	$ 132.19	4%
2"	5.92	5.92	$ 134.40	$ 128.62	4%	$ 201.26	$ 192.69	4%
3"	10.86	10.73	$ 245.83	$ 235.48	4%	$ 368.65	$ 352.97	4%
4"	24.04	24.04	$ 547.05	$ 523.96	4%	$ 820.01	$ 785.07	4%
6"	47.27	47.27	$ 1,075.75	$ 1,029.63	4%	$ 1,613.04	$ 1,544.37	4%
8"	83.56	83.56	$ 1,900.00	$ 1,819.05	4%	$ 2,850.24	$ 2,728.47	4%
10"	94.69	95.13	$ 2,155.48	$ 2,063.49	4%	$ 3,233.00	$ 3,095.48	4%
12"	114.49	114.48	$ 2,605.31	$ 2,493.98	4%	$ 3,907.77	$ 3,741.27	4%
14"	147.41	147.41	$ 3,354.24	$ 3,211.43	4%	$ 5,031.51	$ 4,817.47	4%
20"	193.89	193.27	$ 4,395.95	$ 4,208.18	4%	$ 6,593.97	$ 6,312.32	4%

4.3.3 Summary of Existing and Forecast Water Rates

Based on the calculations from the previous two sections, the existing and proposed rates for the forecast period are shown on Tables 39 and 40 on the following two pages. Note that while the test year rates have been calculated within the cost of service study, the rates for FY 2016 and beyond are based on the overall rate revenue increase from the water utility financial plan.

TABLE 39: SUMMARY OF EXISTING AND FORECAST VOLUMETRIC WATER RATES

Water Volumetric Rates

CUSTOMER CLASS	CONSUMPTION BLOCK	UNITS	FY 2014 Existing Block Rates	Test Year FY 2015 Proposed Block Rates	Forecast FY 2016 Proposed Block Rates	Forecast FY 2017 Proposed Block Rates	Forecast FY 2018 Proposed Block Rates	Forecast FY 2019 Proposed Block Rates	Forecast FY 2020 Proposed Block Rates	Forecast FY 2021 Proposed Block Rates	Forecast FY 2022 Proposed Block Rates	Forecast FY 2023 Proposed Block Rates	Forecast FY 2024 Proposed Block Rates	Forecast FY 2025 Proposed Block Rates
Total Inside City All Classes														
Inside City Block 1	0-35 CCF	($/CCF)	$ 7.52	$ 7.92	$ 8.32	$ 8.69	$ 8.95	$ 9.22	$ 9.45	$ 9.64	$ 9.83	$ 10.03	$ 10.23	$ 10.44
Inside City Block 2	35-2000 CCF	($/CCF)	$ 7.31	$ 7.62	$ 8.00	$ 8.36	$ 8.61	$ 8.87	$ 9.09	$ 9.28	$ 9.46	$ 9.64	$ 9.84	$ 10.09
Inside City Block 3	above 2000 CCF	($/CCF)	$ 5.79	$ 6.09	$ 6.40	$ 6.68	$ 6.89	$ 7.09	$ 7.27	$ 7.42	$ 7.56	$ 7.72	$ 7.87	$ 8.09
Total Outside City All Classes														
Outside City Block 1	0-35 CCF	($/CCF)	$ 11.26	$ 11.88	$ 12.48	$ 13.04	$ 13.43	$ 13.83	$ 14.18	$ 14.46	$ 14.75	$ 15.04	$ 15.35	$ 15.65
Outside City Block 2	35-2000 CCF	($/CCF)	$ 10.97	$ 11.42	$ 12.00	$ 12.54	$ 12.91	$ 13.30	$ 13.63	$ 13.90	$ 14.10	$ 14.47	$ 14.76	$ 15.05
Outside City Block 3	above 2000 CCF	($/CCF)	$ 8.68	$ 9.14	$ 9.60	$ 10.03	$ 10.33	$ 10.64	$ 10.91	$ 11.12	$ 11.35	$ 11.57	$ 11.80	$ 12.04

TABLE 40: SUMMARY OF EXISTING AND FORECAST WATER FIXED CHARGES

Water Fixed Charges CUSTOMER CLASS	FY 2014 Existing Fixed Charge	Test Year FY 2015 Proposed Fixed Charge	Forecast FY 2016 Proposed Fixed Charge	Forecast FY 2017 Proposed Fixed Charge	Forecast FY 2018 Proposed Fixed Charge	Forecast FY 2019 Proposed Fixed Charge	Forecast FY 2020 Proposed Fixed Charge	Forecast FY 2021 Proposed Fixed Charge	Forecast FY 2022 Proposed Fixed Charge	Forecast FY 2023 Proposed Fixed Charge	Forecast FY 2024 Proposed Fixed Charge	Forecast FY 2025 Proposed Fixed Charge
Inside City Residential Customers												
5/8"	$ 21.78	$ 22.00	$ 24.06	$ 25.19	$ 25.80	$ 26.85	$ 27.38	$ 27.88	$ 28.43	$ 29.00	$ 29.58	$ 30.17
3/4"	$ 41.86	$ 44.00	$ 45.23	$ 48.31	$ 49.76	$ 51.25	$ 52.53	$ 53.59	$ 54.65	$ 55.75	$ 56.87	$ 58.00
1"	$ 65.28	$ 68.16	$ 61.06	$ 63.80	$ 65.72	$ 67.69	$ 69.38	$ 70.77	$ 72.18	$ 73.63	$ 75.10	$ 76.60
1-1/2"	$ 65.28	$ 68.15	$ 61.06	$ 63.80	$ 65.72	$ 67.69	$ 69.38	$ 70.77	$ 72.18	$ 73.63	$ 75.10	$ 76.60
2"	$ 65.28	$ 68.15	$ 61.06	$ 63.80	$ 65.72	$ 67.69	$ 69.38	$ 70.77	$ 72.18	$ 73.63	$ 75.10	$ 76.60
Inside City Commercial/Industrial Customers												
5/8"	$ 53.39	$ 55.79	$ 58.88	$ 61.21	$ 63.05	$ 64.94	$ 66.86	$ 67.90	$ 69.25	$ 70.64	$ 72.05	$ 73.49
3/4"	$ 61.26	$ 64.02	$ 67.22	$ 70.25	$ 72.36	$ 74.52	$ 76.38	$ 77.91	$ 79.47	$ 81.06	$ 82.68	$ 84.34
1"	$ 75.10	$ 78.46	$ 82.41	$ 86.11	$ 88.70	$ 91.36	$ 93.64	$ 95.52	$ 97.43	$ 99.37	$ 101.35	$ 103.38
1-1/2"	$ 107.76	$ 112.60	$ 118.23	$ 123.55	$ 127.26	$ 131.08	$ 134.36	$ 137.04	$ 139.79	$ 142.58	$ 145.43	$ 148.34
2"	$ 150.02	$ 157.40	$ 165.27	$ 172.71	$ 177.89	$ 183.22	$ 187.81	$ 191.56	$ 195.39	$ 199.30	$ 203.29	$ 207.35
3"	$ 297.45	$ 310.89	$ 326.38	$ 341.05	$ 351.29	$ 361.83	$ 370.88	$ 378.29	$ 385.85	$ 393.58	$ 401.45	$ 409.48
4"	$ 523.60	$ 547.05	$ 574.40	$ 600.25	$ 618.26	$ 636.81	$ 652.73	$ 665.78	$ 679.10	$ 692.68	$ 706.53	$ 720.66
6"	$ 1,029.40	$ 1,075.75	$ 1,129.54	$ 1,180.37	$ 1,215.78	$ 1,252.25	$ 1,283.56	$ 1,309.23	$ 1,335.41	$ 1,362.12	$ 1,389.36	$ 1,417.15
8"	$ 1,492.88	$ 1,560.05	$ 1,638.06	$ 1,711.77	$ 1,763.12	$ 1,816.01	$ 1,861.41	$ 1,898.64	$ 1,936.61	$ 1,975.35	$ 2,014.85	$ 2,055.15
10"	$ 2,080.75	$ 2,153.48	$ 2,261.16	$ 2,362.91	$ 2,433.80	$ 2,506.81	$ 2,569.48	$ 2,620.87	$ 2,673.29	$ 2,726.75	$ 2,781.29	$ 2,836.91
12"	$ 2,493.12	$ 2,605.31	$ 2,735.57	$ 2,858.67	$ 2,944.43	$ 3,032.77	$ 3,108.58	$ 3,170.76	$ 3,234.17	$ 3,298.86	$ 3,364.83	$ 3,432.13
16"	$ 3,102.64	$ 3,242.25	$ 3,404.36	$ 3,557.55	$ 3,664.28	$ 3,774.21	$ 3,868.57	$ 3,945.94	$ 4,024.85	$ 4,105.35	$ 4,187.45	$ 4,271.21
20"	$ 3,351.18	$ 3,501.93	$ 3,677.08	$ 3,842.54	$ 3,957.82	$ 4,076.55	$ 4,178.47	$ 4,262.04	$ 4,347.28	$ 4,434.23	$ 4,522.91	$ 4,613.37
Outside City Residential Customers												
5/8"	$ 32.48	$ 34.17	$ 35.87	$ 37.40	$ 38.51	$ 39.77	$ 40.77	$ 41.58	$ 42.41	$ 43.26	$ 44.13	$ 45.01
3/4"	$ 62.71	$ 65.95	$ 69.25	$ 72.37	$ 74.54	$ 76.78	$ 78.68	$ 80.27	$ 81.87	$ 83.51	$ 85.18	$ 86.89
1"	$ 82.79	$ 87.08	$ 91.43	$ 95.55	$ 98.42	$ 101.37	$ 103.90	$ 105.98	$ 108.10	$ 110.26	$ 112.47	$ 114.72
1-1/2"	$ 82.79	$ 87.08	$ 91.43	$ 95.55	$ 98.42	$ 101.37	$ 103.90	$ 105.98	$ 108.10	$ 110.26	$ 112.47	$ 114.72
2"	$ 82.79	$ 87.08	$ 91.43	$ 95.55	$ 98.42	$ 101.37	$ 103.90	$ 105.98	$ 108.10	$ 110.26	$ 112.47	$ 114.72
Outside City Commercial/Industrial Customers												
5/8"	$ 83.19	$ 88.74	$ 87.90	$ 91.88	$ 94.64	$ 97.48	$ 99.92	$ 101.91	$ 103.95	$ 106.03	$ 108.15	$ 110.32
3/4"	$ 91.72	$ 95.04	$ 100.60	$ 105.15	$ 108.30	$ 111.57	$ 114.36	$ 116.64	$ 118.97	$ 121.35	$ 123.78	$ 126.26
1"	$ 107.67	$ 107.74	$ 123.61	$ 129.18	$ 133.07	$ 137.06	$ 140.49	$ 143.31	$ 146.18	$ 149.09	$ 152.07	$ 155.11
1-1/2"	$ 161.79	$ 169.06	$ 177.52	$ 185.61	$ 191.07	$ 196.80	$ 201.72	$ 205.76	$ 209.87	$ 214.07	$ 218.35	$ 222.72
2"	$ 220.09	$ 230.26	$ 240.87	$ 229.24	$ 267.01	$ 275.02	$ 281.90	$ 287.54	$ 293.29	$ 299.15	$ 305.14	$ 311.24
3"	$ 448.47	$ 468.85	$ 490.06	$ 514.28	$ 529.65	$ 545.54	$ 559.18	$ 570.36	$ 581.77	$ 593.41	$ 605.28	$ 617.38
4"	$ 785.37	$ 820.71	$ 861.74	$ 900.52	$ 927.53	$ 955.35	$ 979.24	$ 998.83	$ 1,018.81	$ 1,039.18	$ 1,059.97	$ 1,081.17
6"	$ 1,543.07	$ 1,613.34	$ 1,694.00	$ 1,770.23	$ 1,823.34	$ 1,878.04	$ 1,924.98	$ 1,963.48	$ 2,002.76	$ 2,042.82	$ 2,083.67	$ 2,125.35
8"	$ 2,239.47	$ 2,340.24	$ 2,457.26	$ 2,567.89	$ 2,644.87	$ 2,724.21	$ 2,792.32	$ 2,848.16	$ 2,905.13	$ 2,963.23	$ 3,022.50	$ 3,082.95
10"	$ 3,107.48	$ 3,247.30	$ 3,409.67	$ 3,563.10	$ 3,670.00	$ 3,780.10	$ 3,874.60	$ 3,952.09	$ 4,031.13	$ 4,111.76	$ 4,193.99	$ 4,277.87
12"	$ 3,739.51	$ 3,907.77	$ 4,103.16	$ 4,287.80	$ 4,416.44	$ 4,548.93	$ 4,662.66	$ 4,755.91	$ 4,851.03	$ 4,948.05	$ 5,047.01	$ 5,147.95
16"	$ 4,653.87	$ 4,863.26	$ 5,105.44	$ 5,335.29	$ 5,495.32	$ 5,661.21	$ 5,802.74	$ 5,918.79	$ 6,037.17	$ 6,157.91	$ 6,281.07	$ 6,406.69
20"	$ 5,463.82	$ 5,709.67	$ 5,995.16	$ 6,264.94	$ 6,452.89	$ 6,646.48	$ 6,812.64	$ 6,948.89	$ 7,087.87	$ 7,229.63	$ 7,374.22	$ 7,521.70

4.3.4 Projected Residential Water Bills

Table 41 below indicates projected water bills for Residential Inside City customers with a 5/8" meter. Also included are estimates of the bills, which residential customer may have seen, had the City continued to purchase water from DWSD. For example, had the City continued to purchase water from DWSD, a typical Flint customer using 5 CCF per month would have an estimated water bill in FY 2015 of $67.38 Given the shift to KWA, that same customer would see a bill of $62.51, a savings of $4.87 per month, or $58.44 per year.

TABLE 41: PROJECTED RESIDENTIAL WATER BILLS

ESTIMATED MONTHLY SAVINGS (KWA Ver. Now)	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Monthly Usage (CCF)												
1	$ -	$ (5.42)	$ (5.70)	$ (5.98)	$ (6.28)	$ (6.59)	$ (6.91)	$ (7.25)	$ (7.61)	$ (7.99)	$ (8.39)	$ (8.81)
2	$ -	$ (5.04)	$ (5.29)	$ (5.56)	$ (5.84)	$ (6.13)	$ (6.44)	$ (6.76)	$ (7.10)	$ (7.45)	$ (7.82)	$ (8.21)
3	$ -	$ (4.66)	$ (4.91)	$ (5.16)	$ (5.42)	$ (5.69)	$ (5.98)	$ (6.28)	$ (6.59)	$ (6.92)	$ (7.27)	$ (7.63)
4	$ -	$ (4.28)	$ (4.49)	$ (4.72)	$ (4.96)	$ (5.21)	$ (5.47)	$ (5.75)	$ (6.04)	$ (6.34)	$ (6.66)	$ (6.99)
5	$ -	$ (3.90)	$ (4.09)	$ (4.29)	$ (4.51)	$ (4.73)	$ (4.97)	$ (5.22)	$ (5.48)	$ (5.76)	$ (6.05)	$ (6.35)
6	$ -	$ (3.52)	$ (3.69)	$ (3.87)	$ (4.06)	$ (4.26)	$ (4.48)	$ (4.70)	$ (4.93)	$ (5.18)	$ (5.43)	$ (5.71)
7	$ -	$ (3.14)	$ (3.29)	$ (3.45)	$ (3.62)	$ (3.80)	$ (3.99)	$ (4.19)	$ (4.39)	$ (4.61)	$ (4.84)	$ (5.07)
8	$ -	$ (2.76)	$ (2.89)	$ (3.03)	$ (3.18)	$ (3.34)	$ (3.50)	$ (3.67)	$ (3.86)	$ (4.05)	$ (4.25)	$ (4.46)
9	$ -	$ (2.38)	$ (2.49)	$ (2.61)	$ (2.74)	$ (2.87)	$ (3.01)	$ (3.16)	$ (3.31)	$ (3.47)	$ (3.64)	$ (3.82)
10	$ -	$ (1.99)	$ (2.09)	$ (2.19)	$ (2.30)	$ (2.41)	$ (2.53)	$ (2.65)	$ (2.78)	$ (2.92)	$ (3.06)	$ (3.21)

AVERAGE CUSTOMER (KWA Version)	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Monthly Usage (CCF)												
1	$29.29	$ 30.83	$ 32.31	$ 33.92	$ 31.84	$ 35.83	$ 36.78	$ 37.52	$ 38.27	$ 39.03	$ 39.81	$ 40.61
2	$36.61	$ 36.75	$ 40.68	$ 42.51	$ 43.79	$ 45.10	$ 46.23	$ 47.16	$ 48.10	$ 49.06	$ 50.04	$ 51.04
3	$44.23	$ 46.67	$ 49.00	$ 51.21	$ 52.74	$ 54.32	$ 55.68	$ 56.80	$ 57.93	$ 59.09	$ 30.27	$ 61.46
4	$51.85	$ 54.59	$ 57.32	$ 59.30	$ 61.69	$ 63.55	$ 65.13	$ 66.44	$ 67.77	$ 69.12	$ 70.50	$ 71.91
5	$59.37	$ 62.51	$ 65.64	$ 68.39	$ 70.65	$ 72.77	$ 74.59	$ 76.08	$ 77.60	$ 79.15	$ 30.73	$ 82.35
6	$66.88	$ 70.43	$ 73.96	$ 77.28	$ 79.60	$ 81.99	$ 84.04	$ 85.72	$ 87.43	$ 89.18	$ 90.96	$ 92.78
7	$74.40	$ 78.36	$ 82.28	$ 85.97	$ 88.55	$ 91.21	$ 93.49	$ 95.36	$ 97.27	$ 99.21	$ 101.21	$ 103.22
8	$81.92	$ 86.27	$ 90.60	$ 94.66	$ 97.50	$ 100.43	$ 102.94	$ 105.00	$ 107.10	$ 109.24	$ 111.43	$ 113.65
9	$89.44	$ 94.20	$ 98.93	$ 103.36	$ 106.46	$ 109.65	$ 112.39	$ 114.64	$ 116.93	$ 119.27	$ 121.65	$ 124.08
10	$96.96	$ 102.12	$ 107.22	$ 112.76	$ 115.41	$ 118.87	$ 121.84	$ 124.28	$ 126.77	$ 129.31	$ 131.89	$ 134.52

AVERAGE CUSTOMER (DWSD Version)	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Monthly Usage (CCF)												
1	$29.29	$ 33.25	$ 37.74	$ 39.52	$ 40.81	$ 42.14	$ 43.09	$ 44.17	$ 45.27	$ 46.40	$ 47.56	$ 48.51
2	$36.61	$ 41.78	$ 47.42	$ 49.79	$ 51.29	$ 52.83	$ 54.15	$ 55.50	$ 56.89	$ 58.31	$ 59.77	$ 60.96
3	$44.23	$ 50.31	$ 57.11	$ 59.96	$ 61.76	$ 63.61	$ 65.20	$ 66.83	$ 68.51	$ 70.22	$ 71.97	$ 73.41
4	$51.85	$ 58.86	$ 66.79	$ 70.13	$ 72.24	$ 74.40	$ 76.26	$ 78.17	$ 80.12	$ 82.13	$ 84.13	$ 85.86
5	$59.37	$ 67.38	$ 76.48	$ 80.30	$ 82.71	$ 85.19	$ 87.32	$ 89.50	$ 91.74	$ 94.03	$ 96.39	$ 98.31
6	$66.88	$ 75.91	$ 86.16	$ 90.47	$ 93.18	$ 95.93	$ 98.38	$ 100.84	$ 103.36	$ 105.94	$ 108.59	$ 110.76
7	$74.40	$ 84.45	$ 95.85	$ 100.64	$ 103.66	$ 106.77	$ 109.44	$ 112.17	$ 114.98	$ 117.85	$ 120.80	$ 123.21
8	$81.92	$ 92.98	$ 105.53	$ 110.81	$ 114.13	$ 117.55	$ 120.50	$ 123.51	$ 126.60	$ 129.76	$ 133.00	$ 135.66
9	$89.44	$ 101.51	$ 115.22	$ 120.98	$ 124.61	$ 128.34	$ 131.55	$ 134.84	$ 138.21	$ 141.67	$ 145.21	$ 148.11
10	$96.96	$ 110.05	$ 124.90	$ 131.15	$ 135.08	$ 139.13	$ 142.61	$ 146.18	$ 149.83	$ 153.58	$ 157.42	$ 160.56

5. WASTEWATER UTILITY COST OF SERVICE STUDY

Following the development of the wastewater utility financial plans the next step is to determine the level of rate revenues required to adequately recover the cost of providing wastewater service. This is typically performed for a test year, which—as mentioned previously—is the year ending June 30, 2014 (FY 2015).

5.1 WASTEWATER REVENUE REQUIREMENT FROM RATES

Table 42 below indicates the level of wastewater utility expenditures which must be recovered from rates in the FY 2015 test year. As the table indicates, the total test year revenue requirement is approximately $29 Million.

TABLE 42: WASTEWATER REVENUE REQUIREMENTS

OPERATION AND MAINTENANCE EXPENDITURES												
Revenue/Expense Item	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Dept 500-101-Utilities - Sewer Administration	$ 7,442,430	$ 7,650,942	$ 7,650,942	$ 7,650,942	$ 7,971,570	$ 8,095,210	$ 8,225,940	$ 8,550,051	$ 8,897,000	$ 9,000,091	$ 9,216,100	$ 9,508,200
Total Dept 540-100-Water Service Center Management	$ 2,713,445	$ 839,476	$ 839,476	$ 839,476	$ 866,367	$ 894,148	$ 922,840	$ 952,502	$ 983,141	$ 1,014,803	$ 1,047,513	$ 1,081,318
Total Dept 540-300-WSC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 540-207-Misc Meter Reading - Sewer	$ 700,010	$ 700,419	$ 700,419	$ 700,419	$ 702,919	$ 700,270	$ 814,510	$ 841,000	$ 839,700	$ 880,000	$ 880,970	$ 900,140
Total Dept 540-208-Misc Sewer Maint/Construction	$ 2,703,188	$ 2,797,696	$ 2,797,696	$ 2,797,696	$ 2,886,711	$ 2,987,382	$ 3,102,837	$ 3,212,232	$ 3,325,725	$ 3,443,478	$ 3,566,664	$ 3,692,459
Total Dept 580-100-Npc Operations	$ 5,716,112	$ 5,516,186	$ 5,183,386	$ 5,183,386	$ 5,367,112	$ 5,457,629	$ 5,755,178	$ 5,980,038	$ 6,172,480	$ 6,392,768	$ 6,521,295	$ 6,868,239
Total Dept 520-200-Npc-Third Ave Pump Station	$ 989,910	$ 705,202	$ 705,202	$ 705,202	$ 761,001	$ 709,006	$ 817,004	$ 847,425	$ 870,119	$ 903,900	$ 942,960	$ 971,256
Total Dept 580-214-Npc-Maintenance Expense	$ 2,817,389	$ 2,912,411	$ 2,912,411	$ 2,912,411	$ 3,018,117	$ 3,119,314	$ 3,212,896	$ 3,330,211	$ 3,431,256	$ 3,546,163	$ 3,656,132	$ 3,766,300
Total Dept 580-300-NPC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 520-000-Non dep_Exp-Sewer Portion	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 965-101-Transfers out to Und 101	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000
Total Operation and Maintenance Expenditures	$ 24,233,697	$ 23,053,932	$ 22,720,532	$ 22,720,532	$ 23,394,671	$ 24,013,503	$ 24,014,101	$ 25,567,110	$ 26,327,401	$ 27,124,116	$ 27,347,561	$ 28,004,000
CAPITAL EXPENDITURES												
Revenue/Expense Item	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Grand Total Existing and Proposed Debt Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wastewater Rate Revenue Financing (Cash)	$ 6,900,000	$ 5,900,000	$ 10,000,000	$ 9,500,000	$ 12,500,000	$ 7,500,000	$ 8,000,000	$ 7,900,000	$ 8,000,000	$ 8,000,000	$ 8,200,000	$ 8,500,000
Add Net Operating Surplus/(Deficit)	$ (2,660,381)	$ 1,464,161	$ (1,161,386)	$ 317,080	$ (1,386,371)	$ 3,806,353	$ 2,147,841	$ 3,624,189	$ 3,082,644	$ 3,089,085	$ 2,382,773	$ 2,481,436
Add Wastewater Transfers in Equipment Replacement Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Expenditures	$ 3,839,619	$ 6,964,161	$ 8,838,614	$ 10,317,080	$ 11,113,629	$ 11,306,353	$ 11,147,841	$ 11,524,189	$ 11,082,644	$ 11,089,085	$ 10,582,773	$ 10,981,436
CROSS REVENUE REQUIREMENT FROM RATES	$ 28,073,316	$ 30,017,923	$ 31,629,196	$ 33,207,602	$ 34,490,300	$ 35,597,532	$ 35,950,941	$ 37,091,262	$ 37,420,125	$ 38,173,170	$ 37,940,734	$ 38,720,436
NON-RATE REVENUES												
Revenue/Expense Item	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Non-rate Revenues	$ 395,842	$ 424,670	$ 410,222	$ 423,308	$ 416,336	$ 434,257	$ 405,067	$ 513,187	$ 528,651	$ 543,835	$ 558,860	$ 570,962
NET REVENUE REQUIREMENT FROM RATES	$ 27,677,474	$ 29,593,254	$ 31,219,974	$ 32,784,294	$ 34,081,964	$ 35,163,274	$ 35,545,874	$ 36,578,074	$ 36,891,474	$ 37,629,274	$ 37,381,874	$ 38,149,474

5.2 WASTEWATER REVENUE REQUIREMENTS BY CUSTOMER CLASS

Following the development of the total test year revenue requirement, the proportion of that revenue requirement attributable to each customer class must be determined. This allocation is performed via the multi-step process described below.

5.2.1 O&M Allocation to Function Categories

The first step in determining revenue requirements by customer class is to allocate the test year O&M revenue requirement to functional categories. These categories are functions that the wastewater utility must perform in order to deliver wastewater service to City customers. For the wastewater utility they are: Administrative and General, Customer Service, Collection, Pumping, and Treatment.

The O&M allocations, by department, are shown in Table 43 below:

TABLE 43: WASTEWATER O&M ALLOCATION TO FUNCTIONAL CATEGORIES

DEPARTMENT	Total $ Allocation	Administrative and General	Customer Service	Collection System	Lift Stations and Pumping	Wastewater Treatment
Total Dept 536.101-Utilities - Sewer Administration	$ 7,653,942	$ 7,653,942	$ -	$ -	$ -	$ -
Total Dept 540.100-Water Service Center Management	$ 839,476	$ -	$ 839,476	$ -	$ -	$ -
Total Dept 540.300-WSC - Capital improvements	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 540.207-Wsc-Meter Reading - Sewer	$ 738,419	$ -	$ 738,419	$ -	$ -	$ -
Total Dept 540.208-Wsc-Sewer Maint./Construction	$ 2,797,696	$ -	$ -	$ 2,797,696	$ -	$ -
Total Dept 550.100-Wpc Operations	$ 5,516,166	$ -	$ -	$ -	$ -	$ 5,516,166
Total Dept 550.200-Wpc-Third Ave Pump Station	$ 735,282	$ -	$ -	$ -	$ 735,282	$ -
Total Dept 550.202-Wpc-Maintenance Expense	$ 2,912,411	$ -	$ -	$ -	$ -	$ 2,912,411
Total Dept 550.300-WPC - Capital improvements	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 550.800-Non_dep_Exp-Sewer Portion	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 966.101-Transfers out to fund 101	$ 1,860,000	$ 1,860,000	$ -	$ -	$ -	$ -
GRAND TOTAL WASTEWATER UTILITY	$ 23,053,392	$ 9,513,942	$ 1,577,894	$ 2,797,696	$ 735,282	$ 8,428,578

5.2.2 O&M Allocation to Cost Components

Once O&M costs have been allocated to functional categories, the total O&M revenue requirement allocated to each functional category must be further allocated based on the operational need which they are designed to fulfill. For this allocation RFC has generally utilized the cost allocation methodology described in the Water Environment Federation's Manual of Practice No. 27, "Financing and Charges for Wastewater Systems."

The costs components utilized in this study are: volume or wastewater utility costs which are incurred on the basis of the quantity of wastewater discharged into the system; strength measures such as Biochemical Oxygen Demand ("BOD"), Total Suspended Solids ("TSS") and Phosphorus; and customer measures such as equivalent meters and monthly bills. A summary of the allocation of the wastewater O&M revenue requirement is included in Table 44 on the following page.

TABLE 44: WASTEWATER O&M ALLOCATION TO COST COMPONENTS

FUNCTIONAL CLASSIFICATION	Total $ Allocation	Volume Allocation	Strength			Customer	
			Allocation To BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
Administrative and General	$ 9,613,942	$ 2,482,564	$ 1,974,206	$ 1,974,206	$ 1,974,206	$ 1,108,760	$ -
Customer Service	$ 1,577,894	$ -	$ -	$ -	$ -	$ 1,577,894	$ -
Collection System	$ 2,797,696	$ 2,797,696	$ -	$ -	$ -	$ -	$ -
Lift Stations and Pumping	$ 735,282	$ 735,282	$ -	$ -	$ -	$ -	$ -
Wastewater Treatment	$ 8,428,578	$ -	$ 2,809,526	$ 2,809,526	$ 2,809,526	$ -	$ -
	$ 23,153,392	$ 6,015,542	$ 4,783,732	$ 4,783,732	$ 4,783,732	$ 2,686,654	$ -

5.2.3 Capital Cost Allocation to Functional Components

Similar to the allocation of the O&M revenue requirement described in the previous section, the capital revenue requirement must be allocated to functional categories. Table 45 below indicates the allocation of capital costs.

TABLE 45: WASTEWATER CAPITAL ALLOCATION TO FUNCTIONAL CATEGORIES

Allocation of Capital Costs to Functional Categories						
	Total	Administrative and General	Customer Service	Collection System	Lift Stations and	Wastewater Treatment
Breakdown of Fixed Assets by Function	**100%**	**0.32%**	**0.00%**	**82.79%**	**4.31%**	**12.58%**
Total Capital Expenditures	**$ 7,230,845**	**$ 22,823.92**	**$ -**	**$ 5,986,709**	**$ 311,745**	**$ 909,567**
$ Allocation of Water Fixed Assets to Functional Categories						
FIXED ASSET CATEGORY	Net Book Value	Administrative and General	Customer Service	Collection System	Lift Stations and	Wastewater Treatment
01Land	$ 38,077	$ 120	$ -	$ 31,526	$ 1,642	$ 4,790
02Construction-in-progress	$ 527,286	$ 1,664	$ -	$ 436,561	$ 22,733	$ 66,327
11Land Improvements	$ 3,480,377	$ 10,986	$ -	$ 2,881,545	$ 150,050	$ 437,796
12Building Improvements	$ 752,952	$ 2,377	$ -	$ 623,399	$ 32,462	$ 94,714
13Sewage disposal plant & equipment	$ 6,581,444	$ -	$ -	$ -	$ -	$ 6,581,444
14Vehicle	$ 456,125	$ -	$ -	$ 456,125	$ -	$ -
15 Sewage Pumping Station	$ 2,255,719	$ -	$ -	$ -	$ 2,255,719	$ -
16Office & Other Equipment	$ 28,892	$ 28,892	$ -	$ -	$ -	$ -
17Sewer SSR	$ 42,862,474	$ -	$ -	$ 42,862,474	$ -	$ -
18Sanitary Sewers (Engg only)	$ 136,257	$ 136,257	$ -	$ -	$ -	$ -
Total Water Fixed assets	$ 57,119,603	$ 180,296	$ -	$ 47,291,630	$ 2,462,606	$ 7,185,071
% Breakdown	100.00%	0.32%	0.00%	82.79%	4.31%	12.58%

As the table above indicates, the basis for the allocation of capital costs was the existing level of wastewater utility investment in fixed assets. The existing net book value of each major asset class was allocated to the functional categories. The total capital revenue requirement, approximately 7 Million in the test year, was then allocated according to the proportion of existing investment in each functional category. For example, a large proportion of investment in wastewater fixed assets relates to the rehabilitation of the City's collection system ("Sewer SSR"). As such, the majority of the capital revenue requirement (82%) has been allocated to the collection system function.

5.2.4 Capital Cost Allocation to Cost Components

As with the allocation of the O&M revenue requirement described above, the functionally allocated capital revenue requirement must also be further allocated according to the operational need that each function is designed to fulfill.

Table 46 below summarizes this allocation.

TABLE 46: WASTEWATER CAPITAL ALLOCATION TO COST COMPONENTS

			Strength			Customer	
FUNCTIONAL CLASSIFICATION	Total $ Allocation	Volume Allocation	Allocation To BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
Administrative and General	22,824	19,944	960	960	960	-	-
Customer Service	-	-	-	-	-	-	-
Collection System	5,986,709	5,986,709	-	-	-	-	-
Lift Stations and Pumping	311,745	311,745	-	-	-	-	-
Wastewater Treatment	909,567	-	303,189	303,189	303,189	-	-
Total Capital Expenditures	7,230,845	6,318,397	304,149	304,149	304,149	-	-

5.2.5 Non-Rate Revenue Allocation to Cost Components

Non-rate revenue must be excluded from the O&M and Capital revenue requirements as these amounts are an offset to the revenue requirement which will be recovered from rates. Consequently, non-rate revenues are allocated to the cost components so that they can be removed from the total revenue requirement. In this case, non-rate revenues were allocated proportionally according to the total O&M revenue requirement allocation and can be seen in Table 47 below.

TABLE 47: WASTEWATER NON-RATE REVENUE ALLOCATION TO COST COMPONENTS

			Strength			Customer	
ACCOUNT CODE DESCRIPTION	Total $ Allocation	Volume Allocation	Allocation To BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
590536.101-456.000 Bus.Licenses & Permits - Utilities	21,872	6,707	4,539	4,539	4,539	2,549	-
590536.101-530.000 Federal Grants	-	-	-	-	-	-	-
590536.101-530.001 State Grants	-	-	-	-	-	-	-
590536.101-654.000 Fines - Turn On Fees - Utilities							
590536.101-657.100 Forfeited Discount - Utilities	360,000	91,329	72,627	72,627	72,627	40,789	-
590536.101-690.000 Self Insurance recoveries	-	-	-	-	-	-	-
590536.101-800.000 Due From Fund Balance	-	-	-	-	-	-	-
590536.101-699.999 Prior Year Revenue	-	-	-	-	-	-	-
590540.100677.000 Reimbursements	-	-	-	-	-	-	-
590540.208636.000 Charges For Services Rendered	-	-	-	-	-	-	-
590540.208636.001 Charges For Service Rendered - Internally							
590540.208677.000 Reimbursements	-	-	-	-	-	-	-
590540.200677.000 Reimbursements -proprietary funds	-	-	-	-	-	-	-
590580.100648.000 Scrap Sales	20,000	5,210	4,150	4,150	4,150	2,331	-
590580.100649.000 Auction Rev- Forfeited & Others	-	-	-	-	-	-	-
590580.100657.000 Fines - Turn On Fees - Utilities	-	-	-	-	-	-	-
590580.100677.000 Reimbursements	-	-	-	-	-	-	-
590580.100699.998 Due From Fund Balance							
590580.200696.000 Discounts Earned	2,000	522	415	415	415	233	-
590580.201-456.000 Bus.Licenses & Permits - Utilities	2,000	522	415	415	415	233	-
590580.202600.000 Due From Fund Balance	-	-	-	-	-	-	-
590580.800664.100 Interest Earned	37,890	7,226	6,746	6,746	6,746	3,227	-
Add Transfers in from General Fund	-	-	-	-	-	-	-
Total Non-Rate Revenues	423,962	110,524	87,802	87,802	87,802	49,362	-

5.2.6 Plant Balance Analysis

Once each component of the revenue requirements has been determined, wastewater strength units, by customer class must be estimated. These are the basis upon which the strength costs, determined in the previous step, are allocated to each customer class.

This allocation is performed via a proportional distribution of each measure of strength to each customer class, based on the contribution of that class to overall billed wastewater volumes. This calculation is shown in Table 48 below.

TABLE 48: WASTEWATER PLANT BALANCE ANALYSIS CALCULATIONS

CUSTOMER CLASS	Test Year Volume (CCF)	Biochemical Oxygen Demand mg/L	Biochemical Oxygen Demand Pounds	Total Suspended Solids mg/L	Total Suspended Solids Pounds	Phosphorous mg/L	Phosphorous Pounds	Test Year Combined Pounds
Treatment Plant Volumes	3,883,016	84.5	1,095,381.27	69.5	1,401,011.30	4.25	96,786.56	3,880,000
less:								
Total Inside City Residential	1,770,077	100	919,000	90	910,477	2	17,177	1,902,094
Total Inside City Commercial/Industrial	1,388,721	100	887,451	93	813,007	2	15,238	1,705,696
Total Outside City Residential	205	100	129	93	120	2	2	251
Total Outside City Commercial/Industrial	7,012	100	4,289	90	4,076	2	70	8,435
Total System Billed Volumes	2,982,604	100	1,871,099	93	1,733,639	2	32,494	3,637,192
Total Infiltration and Inflow	885,412	15	64,272.40	15	64,272.40	15	64,272.40	128,817
Balance	-		(0)		(0)		-	-
Gallons per CCF	7.48							
Milligrams per Pound	453,592							
Liters per Gallon	3.7854							
% Infiltration and Inflow	29%							

As an example, consider Biochemical Oxygen Demand. The proportion of BOD contributed to the wastewater system by each class, is function of the overall volume contributed by that class. Therefore the BOD units are allocated to each customer class based on their proportion of total billed volumes. Inside City Residential customers, for example, are forecasted to contribute 1.5 Million CCF in billed wastewater volumes in the test year, or 53% of total billed volumes. Consequently, they are assigned 53% of total forecast BOD. The same calculations are performed for the remaining strength units, TSS and Phosphorous.

The result is a total level of strength units for each customer class, which is then used to determine unit costs by customer class and allocate the test year revenue requirement.

5.2.7 Calculation of Units of Service

The next step in the cost allocation process is to summarize the units of service, which are used as the basis for the allocation of the total revenue requirement to each of the customer classes. The units pertain to each of the cost components mentioned above (i.e. strength, volume and customer units). In the following step, the units will be used to determine a unit cost for each cost component.

The wastewater units of service are shown in Table 49 below.

TABLE 49: WASTEWATER UNITS OF SERVICE

WASTEWATER UNITS OF SERVICE		Residential		Commercial/Industrial	
	Total System (CCF)	Total Inside City Residential	Total Outside City Residential	Total Inside City Commercial/Industrial	Total Outside City Commercial/Industrial
Volume Units					
% Breakdown		52.9%	0.0%	46.9%	0.2%
Total System Billed Volumes	2,982,604	1,576,666	206	1,398,721	7,012
Total Infiltration and Inflow	686,412	362,852	47	321,900	1,614
Total Volume	3,669,016	1,939,517	253	1,720,620	8,625
Strength Units					
BOD	1,871,059	989,080	129	877,451	4,399
TSS	1,733,639	916,437	120	813,007	4,076
Phosporous	32,494	17,177	2	15,238	76
Total Wastewater Strength (Pounds)	3,637,192	1,922,694	251	1,705,696	8,550
Customer Units					
Meters	33,177	25,436	6	7,699	35
Bills	315,952	301,096	71	14,646	137

As mentioned above the units determined for each customer class are volume (the total forecast wastewater contribution) strength (the proportion of wastewater strength units determined in the plant balance analysis) and customer (equivalent meters and customer bills as in the water cost of service study).

5.2.8 Unit Cost of Service

Following the allocation of the wastewater revenue requirements to each of the cost components and the calculation of the units of service, a unit cost of service for each cost component can be determined. These unit costs are the basis by which the revenue requirements by customer class are determined.

The unit cost of service is the total revenue requirement, as allocated to the cost components, divided by the units of service attributable to each component and is shown in Table 50 on the following page.

TABLE 50: WASTEWATER UNIT COST OF SERVICE

Wastewater Unit Cost of Service

CUSTOMER CLASS	Volume Allocation	Strength			Customer	
		Allocation to BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
Total Inside City Residential	1,090,597	930,080	916,437	17,171	25,436	301,035
Total Outside City Residential	253	29	120	2	6	71
Total Inside City Commercial/Industria	1,730,620	877,451	813,207	15,238	7,689	14,846
Total Outside City Commercial/Industrial	8,625	4,389	4,076	76	35	137
Grand Total System Units of Service	3,689,016	1,871,059	1,733,839	32,491	33,117	316,952

Wastewater Cash Basis Revenue Requirements

REVENUE REQUIREMENT	Total	Volume Allocation	Strength			Customer	
			Allocation to BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
Total Operation and Maintenance Expenditures	$ 23053,382	$ 6,015,942	$ 4,788,132	$ 4,788,132	$ 4788,732	$2,886,664	$ -
Unit Cost		$ 1.64	$ 2.56	$ 2.76	$ 147.22	$ 80.98	$ -
Total Capital Expenditures	$ 7230,845	$ 6,318,387	$ 304,749	$ 304,149	$ 304,149	$ -	$ -
Unit Cost		$ 1.72	$ 0.16	$ 0.18	$ 9.36	$ -	$ -
Total Non-Rate Revenues	$ (423,952)	$ (10,824)	$ (87,892)	$ (87,392)	$ (87,892)	$ (49,952)	$
Unit Cost		$ (0.03)	$ (0.05)	$ (0.05)	$ (2.70)	$ (1.58)	$ -
Total System Revenue Requirements	$ 29860,67	$ 12,223,415	$ 4,998,989	$ 4,998,989	$ 4998,989	$2,657,292	$ -
Total System Unit COS	$ -	$ 3.33	$ 2.67	$ 2.88	$ 153.86	$ 79.19	$ -

For example, the total volume units are 3.6 Million CCF. This means that the O&M, Capital and Non-Rate Revenue Requirements cost $1.64, $1.72 and $(.03) per unit of wastewater volume. The total unit cost associated with wastewater volume is $3.33/CCF. The calculation is repeated for each cost component to determine the overall unit cost associated with wastewater volume, strength (BOD, TSS and Phosphorous) and customer service.

5.2.9 Revenue Requirements by Customer Class

The customer class revenue requirements are the basis for establishing alternative rates by customer class. The City's existing wastewater rate structure does not include distinct rates by customer class. At this time the City does not wish to make major rate structure changes. However, the revenue requirements by customer class are shown in Table 51 on the following page and are the basis for the alternative wastewater rates presented as appendix B to this report.

TABLE 51: WASTEWATER REVENUE REQUIREMENTS BY CUSTOMER CLASS

Wastewater Units of Service			Strength			Customer	
CUSTOMER CLASS		Volume Allocation	Allocation To BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
Total System Revenue Requirements	$ 29,860,674	$ 12,223,415	$ 4,999,989	$ 4,999,989	$ 4,999,989	$2,637,292	$ -
Total System Unit COS		$ 3.33	$ 2.67	$ 2.88	$ 153.87	$ 79.49	$ -
Units of Service							
Total Inside City Residential		1,939,517	989,080	916,437	17,177	25,436	301,096
Total Inside City Commercial/Industrial		1,720,620	877,451	813,007	15,238	7,699	14,646
		3,660,138	1,866,531	1,729,444	32,415	33,136	315,743
Total Outside City Residential		253	129	120	2	6	71
Total Outside City Commercial/Industrial		8,625	4,399	4,076	76	35	137
		8,878	4,528	4,195	79	42	209
Total System Units of Service		3,669,016	1,871,059	1,733,639	32,494	33,177	315,952
Allocated Cost of Service							
Total Inside City Residential COS	$ 16,412,799	$ 6,461,549	$ 2,643,097	$ 2,643,097	$ 2,643,097	$2,021,959	$ -
Total Inside City Commercial/Industrial COS	$ 13,378,697	$ 5,732,268	$ 2,344,793	$ 2,344,793	$ 2,344,793	$ 612,030	$ -
Total Inside City All Classes	$ 29,791,496	$ 12,193,837	$ 4,987,890	$ 4,987,890	$ 4,987,890	$2,633,989	$ -
Total Outside City Residential COS	2,382.16	$ 843	$ 345	$ 345	$ 345	$ 505	$ -
Total Outside City Commercial/Industrial COS	66,796.05	$ 28,735	$ 11,754	$ 11,754	$ 11,754	$ 2,798	$ -
Total Outside City All Classes	$ 69,178	$ 29,578	$ 12,099	$ 12,099	$ 12,099	$ 3,303	$ -
Total System Cost of Service	$ 29,860,674	$ 12,223,415	$ 4,999,989	$ 4,999,989	$ 4,999,989	$2,637,292	$ -
Check on Total System COS (Should be $0)	$ -						

The revenue requirement for each customer class is the total unit cost of service determined previously, multiplied by the units of service for each customer class. The result is a total allocation to each customer class made up of each of the cost components discussed previously. The allocation is based on each customer class's contribution to the wastewater utility's overall operating and capital costs, as represented by their units of service.

5.3 WASTEWATER RATE DESIGN

The wastewater rates have been calculated under the existing rate structure and under a new structure which recognizes the customer classes present in the City's CIS. The rate calculation under existing rates will be presented here, with the alternative rates by customer class presented as an appendix B.

5.3.1 Volumetric Rate Calculations

As mentioned above, the City did not indicate a desire to significantly modify the existing wastewater rate structure. Therefore RFC maintained various components of the existing water volumetric rates including:

- The existing inside/outside city differential (i.e. outside=110% of inside)
- The existing structure which charges the same volumetric rates for all customer classes
- The existing shift of some volumetric costs to the fixed service charge (i.e. a readiness to serve adjustment)

The calculation of the wastewater volumetric rates involves the following steps

- Determine total composite volumetric revenue requirement:
    - Adjust the test-year revenue requirement allocated to the volume cost component by the readiness to serve amount
    - Add the wastewater strength related cost components (BOD, TSS and Phosphorous)
    - Remove Beecher Metro Revenue
    - Add the inside and outside city revenue requirements to determine a composite revenue requirement for all customer classes
- Determine the composite wastewater units:
    - Multiply the units of inside and outside city customers by the existing I/O differential (Outside=110% of Inside)
    - Add those units together.
- Calculate Inside and Outside City Volumetric Rates:
    - Determine a composite rate for all customer classes by dividing the total composite revenue requirement determined above, by the total composite wastewater units
    - Multiply the composite rates by the Inside and Outside City differentials (100% for Inside City and 110% for Outside City) to determine the rates for each customer class.

The above calculations are summarized in Table 52 on the following page.

TABLE 52: WASTEWATER VOLUMETRIC RATE CALCULATIONS

	Revenue Requirements								Test Year Volumes					Test Year Rate Calculation			
	Test Year Volume RR	Test Year Strength RR (BOD)	Test Year Strength RR (TSS)	Test Year Strength RR (Flow	Test Year Total Volumetric RR	Less Dischar Metro Revenue	Adjusted Revenue Requiremen	Composite Revenue Requirement	Test Year Billed Volumes CCF	Test Year Billed Volumes %Breakdown	Test Year Differential Times Inside City	Test Year Adjusted Consumption CCF	Test Year Composite Consumption CCF	Test Year Volumetric Rates $/CCF	Existing Volumetric Rates $/CCF	Difference $	Difference %
EXISTING RATE DESIGN																	
Total Inside City COS	$ 2,193,837	$ 4,987,890	$ 4,987,890	$ 4,987,890	$ -	$ -	$ -	$ -									
RTS Adjustment	$ (1,078,309)	$ -	$ -	$ -	$ -	$ -	$ -	$ -									
Total Inside City All Classes	$ 1,115,528	$ 4,987,890	$ 4,987,890	$ 4,987,890	$ 16,079,199	$ (711,543)	$ 15,367,655	$ 15,417,914	2,982,804	100.00%	1.000	2,983,326	2,983,326	$ 5.17	4.8	$ 0.37	8%
Total Outside City COS	$ 29,578	$ 12,089	$ 12,089	$ 12,089	$ -	$ -	$ -	$ -									
RTS Adjustment	$ (13,890)	$ -	$ -	$ -	$ -	$ -	$ -	$ -									
Total Outside City All Classes	$ 15,688	$ 12,089	$ 12,089	$ 12,089	$ 51,965	$ (1,726)	$ 50,239	$ -			1.000			$ 5.68	5.265	$ 0.41	8%
Total System	$ 1,131,216	$ 4,999,979	$ 4,999,979	$ 4,999,979	$ 16,131,163	$ (713,269)	$ 15,417,914	$ 15,417,914									

5.3.2 Fixed Charge Calculations

As noted above, the City did not express a desire to change rate structures at this time. Consequently, the following aspects of the existing rate structure have been maintained including:

- The existing inside/outside city differential (i.e. outside=120% of inside)
- The existing shift of some volumetric costs to the fixed service charge (i.e. a readiness to serve adjustment)
- The flow equivalencies for the various meter sizes

The calculation of the wastewater fixed charges involves the following steps:

- Determine total composite fixed charge revenue requirement by summing the fixed charge revenue requirements (i.e. those allocated to the customer service related cost components) and the readiness to serve revenue requirement.
- Determine the composite fixed charge wastewater units:
    - Multiply the number of inside and outside city equivalent accounts by the existing I/O differential (Outside=120% of Inside)
    - Add those units together to determine the composite number of equivalent customer accounts
- Calculate Inside and Outside City Volumetric Rates by:
    - Determine an annual composite rate for all customer classes by dividing the total composite revenue requirement determined above, by the total composite wastewater equivalent accounts
    - Determine a monthly rate for the 5/8" equivalent account by dividing the annual rate by 12.
    - Multiply the composite fixed charges by the Inside and Outside City differentials (100% for Inside City and 110% for Outside City) to determine the monthly fixed charge per 5/8" equivalent account for inside and outside city customer classes.
    - Multiply the monthly fixed charge for a 5/8" equivalent account by the meter equivalencies for each meter size to determine the monthly fixed charge for the remaining meter sizes.

The calculations described in the narrative above are summarized in Table 53 on the following page.

TABLE 53: WASTEWATER FIXED CHARGE CALCULATIONS

CUSTOMER CLASS	Readiness to Serve Adjustment: Fixed Charge Revenue Requirement	Readiness to Serve Adjustment: Adjustment	Readiness to Serve Revenue Req.	Base Fixed: FR Allocated on Customer Services	Base Fixed: RR Allocated on Customer Bills
Bld Inside City Residential COS	$ 2,021,969	420.6%	$ 8,504,168	$ 2,021,969	$ -
Bld Outside City Residential COS	$ 995	420.6%	$ 2,120	$ 995	$ -
Bld Inside City Commercial/Industrial COS	$ 612,000	420.6%	$ 2,574,140	$ 612,000	$ -
Bld Outside City Commercial/Industrial COS	$ 2,793	420.6%	$ 11,758	$ 2,793	$ -
Bld Inside City Residential COS Adjustment	$ 2,021,969	$ 8,504,168			
Bld Outside City Residential COS Adjustment	$ 995	$ 2,120			
Bld Inside City Commercial/Industrial COS Adjustment	$ 612,000	$ 2,574,140			
Bld Outside City Commercial/Industrial COS Adjustment	$ 2,793	$ 11,700			

CHARGE	Total Revenue Requirements By Charge	Composite Revenue Requirements	Equivalent Accounts	Ten Year Differential ___ Times Inside City	Test Year Adjusted Equivalent Accounts	Test Year Composite Equivalent Accounts	Monthly Fixed Charge "per 5/8" Equivalent
Bld Inside City Residential	$ 10,525,137	$ 10,528,756	25,406	1.00	25,406	25,444	$ 34.16
Bld Inside City Commercial/Industrial	$ 3,186,170	$ 3,200,736	7,699	1.00	7,699	7,722	$ 34.16
	$ 13,712,298	$ 13,729,491	33,106		33,106	33,166	
Bld Outside City Residential	$ 2,027		6	2	0		$ 41.30
Bld Outside City Commercial/Industrial	$ 14,986		36	2	42		$ 41.30
	17,193		42		90		

CUSTOMER CLASS	Inside City Meter Equivalency	Inside City Meter Equivalency	Proposed Fixed Charge INSIDE CITY	Existing Fixed Charge INSIDE CITY	Difference	Proposed Fixed Charge OUTSIDE CITY	Existing Fixed Charge OUTSIDE CITY	Difference
Residential Customers								
5/8"	.01	1.00	$ 31.48	$ 29.00	8%	$ 44.19	$ 41.00	8%
3/4"	.47	1.46	$ 50.56	$ 46.92	8%	$ 60.35	$ 56.00	8%
1"	2.04	2.00	$ 70.41	$ 65.31	8%	$ 82.36	$ 76.00	8%
1-1/2"	2.04	2.00	$ 70.41	$ 65.31	8%	$ 82.36	$ 76.99	8%
2"	2.04	2.00	$ 70.41	$ 65.31	8%	$ 82.36	$ 76.99	8%
Commercial/Industrial Customers								
5/8"	.62	1.51	$ 55.90	$ 51.89	8%	$ 62.57	$ 58.2	8%
3/4"	2.01	1.92	$ 69.36	$ 64.34	8%	$ 79.46	$ 73.62	8%
1"	2.64	2.65	$ 91.20	$ 84.68	8%	$ 105.56	$ 98.06	8%
1-1/2"	5.31	4.29	$ 148.40	$ 138.83	8%	$ 171.43	$ 164.80	8%
2"	6.15	6.05	$ 211.19	$ 196.03	8%	$ 243.24	$ 232.3	8%
3"	13.62	13.62	$ 471.62	$ 438.03	8%	$ 542.39	$ 522.87	8%
4"	22.56	23.07	$ 777.14	$ 721.82	8%	$ 953.39	$ 886.01	8%
6"	45.62	46.09	$ 1,571.80	$ 1,459.96	8%	$ 1,936.74	$ 1,710.3	8%
8"	61.12	38.92	$ 2,312.79	$ 2,146.23	8%	$ 2,849.27	$ 2,646.52	8%
10"	91.19	91.79	$ 3,141.95	$ 2,918.32	8%	$ 3,792.41	$ 3,522.64	8%
12"	110.07	119.61	$ 3,888.72	$ 3,611.23	8%	$ 4,449.17	$ 4,132.47	8%
16"	14.36	143.17	$ 4,870.53	$ 4,523.95	8%	$ 5,999.11	$ 5,497.91	8%
20"	166.45	180.00	$ 5,731.96	$ 5,323.85	8%	$ 7,032.44	$ 6,502.02	8%

5.3.3 Summary of Existing and Forecast Wastewater Rates

Based on the calculations from the previous two sections, the existing and proposed rates for the forecast period are shown in Tables 54 and 55 on the following page.

Note that while the test year FY 2015 rates have been calculated within the cost of service study, the rates for FY 2016 and beyond are based on the overall rate revenue increase from the wastewater utility financial plan.

TABLE 54: SUMMARY OF EXISTING AND FORECAST VOLUMETRIC WASTEWATER RATES

CUSTOMER CLASS		Test Year FY 2014 Existing Rates	Test Year FY 2015 Proposed Rates	Forecast FY 2016 Proposed Rates	Forecast FY 2017 Proposed Rates	Forecast FY 2018 Proposed Rates	Forecast FY 2019 Proposed Rates	Forecast FY 2020 Proposed Rates	Forecast FY 2021 Proposed Rates	Forecast FY 2022 Proposed Rates	Forecast FY 2023 Proposed Rates	Forecast FY 2024 Proposed Rates	Forecast FY 2025 Proposed Rates
Total Inside City All Classes	($/CCF)	$ 4.80	$ 5.17	$ 5.53	$ 5.92	$ 6.18	$ 6.31	$ 6.43	$ 6.56	$ 6.69	$ 6.83	$ 6.96	$ 7.10
Total Outside City All Classes	($/CCF)	$ 5.29	$ 5.68	$ 6.08	$ 6.51	$ 6.80	$ 6.94	$ 7.08	$ 7.22	$ 7.36	$ 7.51	$ 7.66	$ 7.81

TABLE 55: SUMMARY OF EXISTING AND FORECAST WASTEWATER FIXED CHARGES

CUSTOMER CLASS	Test Year FY 2014 Existing Rates	Test Year FY 2015 Proposed Rates	Forecast FY 2016 Proposed Rates	Forecast FY 2017 Proposed Rates	Forecast FY 2018 Proposed Rates	Forecast FY 2019 Proposed Rates	Forecast FY 2020 Proposed Rates	Forecast FY 2021 Proposed Rates	Forecast FY 2022 Proposed Rates	Forecast FY 2023 Proposed Rates	Forecast FY 2024 Proposed Rates	Forecast FY 2025 Proposed Rates
Inside City Residential Customers												
5/8"	$ 32.00	$ 34.48	$ 36.90	$ 39.48	$ 41.26	$ 42.08	$ 42.92	$ 43.78	$ 44.66	$ 45.55	$ 46.46	$ 47.39
3/4"	$ 46.92	$ 50.55	$ 54.10	$ 57.89	$ 60.49	$ 61.70	$ 62.94	$ 64.19	$ 65.48	$ 66.79	$ 68.12	$ 69.49
1"	$ 66.34	$ 70.41	$ 75.33	$ 80.61	$ 84.24	$ 85.92	$ 87.64	$ 89.39	$ 91.18	$ 93.00	$ 94.86	$ 96.76
1-1/2"	$ 66.34	$ 70.41	$ 75.33	$ 80.61	$ 84.24	$ 85.92	$ 87.64	$ 89.39	$ 91.18	$ 93.00	$ 94.86	$ 96.76
2"	$ 66.34	$ 70.41	$ 75.33	$ 80.61	$ 84.24	$ 85.92	$ 87.64	$ 89.39	$ 91.18	$ 93.00	$ 94.86	$ 96.76
Inside City Commercial/Industrial Customers												
5/8"	$ 51.92	$ 55.90	$ 59.81	$ 64.00	$ 66.88	$ 68.21	$ 69.58	$ 70.97	$ 72.39	$ 73.84	$ 75.31	$ 76.82
3/4"	$ 64.40	$ 69.31	$ 74.23	$ 79.42	$ 83.00	$ 84.65	$ 86.35	$ 88.08	$ 89.84	$ 91.63	$ 93.47	$ 95.34
1"	$ 84.71	$ 91.20	$ 97.68	$ 104.41	$ 109.11	$ 111.29	$ 113.52	$ 115.79	$ 118.10	$ 120.47	$ 122.88	$ 125.33
1-1/2"	$ 137.84	$ 148.40	$ 158.79	$ 169.91	$ 177.55	$ 181.10	$ 184.73	$ 188.42	$ 192.19	$ 196.03	$ 199.95	$ 203.95
2"	$ 195.16	$ 211.19	$ 225.97	$ 241.79	$ 252.67	$ 257.73	$ 262.88	$ 268.14	$ 273.50	$ 278.97	$ 284.55	$ 290.24
3"	$ 436.05	$ 471.62	$ 504.64	$ 539.95	$ 564.26	$ 575.55	$ 587.06	$ 598.80	$ 610.77	$ 622.99	$ 635.45	$ 648.16
4"	$ 721.84	$ 777.14	$ 831.54	$ 889.75	$ 929.79	$ 948.39	$ 967.36	$ 986.70	$ 1,006.43	$ 1,026.56	$ 1,047.09	$ 1,068.04
6"	$ 1,439.55	$ 1,571.60	$ 1,681.62	$ 1,799.55	$ 1,880.53	$ 1,918.14	$ 1,956.50	$ 1,995.63	$ 2,035.54	$ 2,076.26	$ 2,117.78	$ 2,160.14
8"	$ 2,148.21	$ 2,312.79	$ 2,474.68	$ 2,647.91	$ 2,767.07	$ 2,822.41	$ 2,878.86	$ 2,936.44	$ 2,995.16	$ 3,055.07	$ 3,116.17	$ 3,178.49
10"	$ 2,918.38	$ 3,141.97	$ 3,361.91	$ 3,597.24	$ 3,759.12	$ 3,834.30	$ 3,910.99	$ 3,989.21	$ 4,068.99	$ 4,150.37	$ 4,233.38	$ 4,318.05
12"	$ 3,426.23	$ 3,688.72	$ 3,946.93	$ 4,223.22	$ 4,413.26	$ 4,501.52	$ 4,591.56	$ 4,683.39	$ 4,777.05	$ 4,872.60	$ 4,970.05	$ 5,069.45
16"	$ 4,529.95	$ 4,876.53	$ 5,217.47	$ 5,586.27	$ 5,837.20	$ 5,953.74	$ 6,072.62	$ 6,193.87	$ 6,317.55	$ 6,443.70	$ 6,572.37	$ 6,703.62
20"	$ 5,336.87	$ 5,734.96	$ 6,136.41	$ 6,565.96	$ 6,861.42	$ 6,998.65	$ 7,138.63	$ 7,281.40	$ 7,427.03	$ 7,575.57	$ 7,727.08	$ 7,881.62
Outside City Residential Customers												
5/8"	$ 41.01	$ 44.19	$ 47.28	$ 50.59	$ 52.87	$ 53.93	$ 55.01	$ 56.11	$ 57.23	$ 58.37	$ 59.54	$ 60.73
3/4"	$ 55.01	$ 60.35	$ 64.57	$ 69.09	$ 72.20	$ 73.64	$ 75.12	$ 76.62	$ 78.15	$ 79.72	$ 81.31	$ 82.94
1"	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23	$ 103.26	$ 105.32	$ 107.43	$ 109.58	$ 111.77	$ 114.01
1-1/2"	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23	$ 103.26	$ 105.32	$ 107.43	$ 109.58	$ 111.77	$ 114.01
2"	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23	$ 103.26	$ 105.32	$ 107.43	$ 109.58	$ 111.77	$ 114.01
Outside City Commercial/Industria Customers												
5/8"	$ 59.12	$ 62.57	$ 66.95	$ 71.64	$ 74.86	$ 76.36	$ 77.89	$ 79.44	$ 81.03	$ 82.65	$ 84.31	$ 85.99
3/4"	$ 73.62	$ 79.26	$ 84.81	$ 90.75	$ 94.83	$ 96.73	$ 98.66	$ 100.64	$ 102.65	$ 104.70	$ 106.80	$ 108.93
1"	$ 98.05	$ 105.95	$ 112.95	$ 120.85	$ 126.30	$ 128.82	$ 131.40	$ 134.03	$ 136.71	$ 139.44	$ 142.23	$ 145.08
1-1/2"	$ 164.80	$ 177.43	$ 189.85	$ 203.14	$ 212.28	$ 216.52	$ 220.86	$ 225.27	$ 229.78	$ 234.37	$ 239.06	$ 243.84
2"	$ 232.43	$ 250.24	$ 267.76	$ 286.50	$ 299.39	$ 305.38	$ 311.49	$ 317.72	$ 324.07	$ 330.55	$ 337.17	$ 343.91
3"	$ 522.87	$ 562.99	$ 602.39	$ 644.49	$ 673.50	$ 686.97	$ 700.71	$ 714.72	$ 729.01	$ 743.59	$ 758.47	$ 773.64
4"	$ 885.01	$ 953.09	$ 1,020.66	$ 1,092.10	$ 1,141.25	$ 1,164.07	$ 1,187.36	$ 1,211.10	$ 1,235.32	$ 1,260.03	$ 1,285.23	$ 1,310.94
6"	$ 1,770.13	$ 1,905.74	$ 2,039.14	$ 2,181.88	$ 2,280.07	$ 2,325.67	$ 2,372.18	$ 2,419.62	$ 2,468.02	$ 2,517.38	$ 2,567.72	$ 2,619.08
8"	$ 2,646.52	$ 2,849.27	$ 3,048.72	$ 3,262.13	$ 3,408.93	$ 3,477.11	$ 3,546.65	$ 3,617.58	$ 3,689.93	$ 3,763.73	$ 3,839.01	$ 3,915.79
10"	$ 3,522.54	$ 3,792.41	$ 4,057.88	$ 4,341.50	$ 4,537.31	$ 4,628.05	$ 4,720.62	$ 4,815.03	$ 4,911.33	$ 5,009.55	$ 5,109.75	$ 5,211.95
12"	$ 4,132.57	$ 4,449.17	$ 4,760.62	$ 5,093.86	$ 5,323.08	$ 5,429.54	$ 5,538.14	$ 5,648.90	$ 5,761.88	$ 5,877.11	$ 5,994.66	$ 6,114.55
16"	$ 5,497.91	$ 5,919.11	$ 6,333.45	$ 6,776.79	$ 7,081.75	$ 7,223.38	$ 7,367.85	$ 7,515.21	$ 7,665.51	$ 7,818.82	$ 7,975.20	$ 8,134.70
20"	$ 6,532.02	$ 7,032.44	$ 7,524.72	$ 8,051.45	$ 8,413.76	$ 8,582.04	$ 8,753.68	$ 8,928.75	$ 9,107.33	$ 9,289.47	$ 9,475.26	$ 9,664.77

5.3.4 Projected Residential Wastewater Bills

Table 56 below indicates projected wastewater bills for Residential Inside City customers with a 5/8" meter.

TABLE 56: PROJECTED RESIDENTIAL WASTEWATER BILLS

RATE IMPACT 5/8" Customer	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Monthly Usage (CCF)												
1	$ 36.80	$ 39.65	$ 42.43	$ 45.40	$ 47.44	$ 48.39	$ 49.36	$ 50.34	$ 51.35	$ 52.38	$ 53.42	$ 54.49
2	$ 41.60	$ 44.82	$ 47.96	$ 51.31	$ 53.62	$ 54.70	$ 55.79	$ 56.90	$ 58.04	$ 59.20	$ 60.39	$ 61.60
3	$ 46.40	$ 49.99	$ 53.49	$ 57.23	$ 59.81	$ 61.00	$ 62.22	$ 63.47	$ 64.74	$ 66.03	$ 67.35	$ 68.70
4	$ 51.20	$ 55.16	$ 59.02	$ 63.15	$ 65.99	$ 67.31	$ 68.66	$ 70.03	$ 71.43	$ 72.86	$ 74.31	$ 75.80
5	$ 56.00	$ 60.32	$ 64.55	$ 69.06	$ 72.17	$ 73.62	$ 75.09	$ 76.59	$ 78.12	$ 79.68	$ 81.28	$ 82.90
6	$ 60.80	$ 65.49	$ 70.08	$ 74.98	$ 78.36	$ 79.92	$ 81.52	$ 83.15	$ 84.81	$ 86.51	$ 88.24	$ 90.01
7	$ 65.60	$ 70.66	$ 75.61	$ 80.90	$ 84.54	$ 86.23	$ 87.95	$ 89.71	$ 91.51	$ 93.34	$ 95.20	$ 97.11
8	$ 70.40	$ 75.83	$ 81.14	$ 86.81	$ 90.72	$ 92.54	$ 94.39	$ 96.27	$ 98.20	$ 100.16	$ 102.17	$ 104.21
9	$ 75.20	$ 81.00	$ 86.67	$ 92.73	$ 96.90	$ 98.84	$ 100.82	$ 102.84	$ 104.89	$ 106.99	$ 109.13	$ 111.31
10	$ 80.00	$ 86.16	$ 92.20	$ 98.65	$ 103.09	$ 105.15	$ 107.25	$ 109.40	$ 111.59	$ 113.82	$ 116.09	$ 118.42

6. DISCUSSION OF BEST MANAGEMENT PRACTICES (BMP)

We reviewed the City's water and wastewater utility performance in relation to Best Management Practices that have been published by Fitch Ratings ("Fitch"). These criteria are used by Fitch when reviewing the performance of a utility as part of the bond rating process.

6.1 FINANCIAL PROFILE

"Long term integrated financial forecasting that considers future demand, expected rate increases, regulations, and infrastructure renovation and renewal needs."

In general, the City's practices are consistent with this BMP. This report includes ten year comprehensive financial plans for both the water and wastewater utilities. These were developed in collaboration with City staff and reflect the rate revenue increases necessary to adequately fund operation and maintenance expenditures, make necessary capital improvements and ensure fiscal sustainability for each utility on a going forward basis. In addition to these general objectives, the water utility financial plans reflect the transition from DWSD to the KWA, which is expected to lower the level of future rate increases and afford the City greater control over the water utility's operating costs.

"Policies ensure appropriate financial margins, including debt service coverage and operating liquidity levels."

In general the City is taking steps to improve consistency with this BMP. The aforementioned water and wastewater utility financial plans move the City towards an operating reserve target of 90 days of O&M and debt service. These reserves are critical to mitigate the risk inherent in operating a seasonal enterprise. That said, it is also importance to recognize the sensitivity of ratepayers to further increases, especially given the relatively high level of existing rates. Consequently, the City has decided to work up to the 90 day target over the next few fiscal years to mitigate the potential rate impact.

Coverage of existing water utility debt service is quite strong. This stems primarily from the fact that, given the City's past financial difficulties, it has limited access to capital markets for the purpose of funding its capital improvements. At this time, all major capital improvements are forecast to be made out of current rate revenues. If this policy is maintained throughout the forecast period, water utility debt service coverage will likely continue to improve. In the future the City may choose to leverage its water revenues via the Michigan Drinking Water Revolving Revenue Fund, which would spread the rate impact of the forecast capital improvements. Currently, the City does not have any outstanding wastewater debt.

"Regular financial reporting and monitoring systems enable policymaker's access to timely information on fiscal performance relative to the budget."

It is our understanding that the City's reporting systems are consistent with this BMP.

"Limited exposure to growth sensitive revenues, such as tap, connection, or impact fees."

The City's practices are consistent with this BMP. The City currently receives little to no revenue from growth related fees, mostly due to the fact that customer account growth has largely been negative or flat in recent years. Consequently the City is not overly reliant on such fees. However, if customer account growth becomes positive in the future, the City should consider implementing growth related fees to ensure that new customers are adequately compensating existing customers for their investment in the water and wastewater systems.
"Collection policies that regularly track the rate of timely payment receipts and enforce penalties against late payers or terminate service for non-payment."

The City has taken steps to improve consistency with this BMP. In recent years, account delinquency and non-payment has become a significant problem for the City. In addition, City staff has cited issues regarding potential water theft. Given these challenges, the City has engaged a consulting firm to aid in the analysis of their customer information system data, in an effort to recover the lost revenue associated with these issues. This is a critical in that it ensures paying customers are not bearing the burden of water theft going forward.

"Willingness of political leaders to adjust rates when necessary."

The City's practices are consistent with this BMP. Emergency Manager Darnell Early has the authority to raise rates as necessary to ensure the ongoing financial sustainability of the water and wastewater utilities. It is our understanding however, that input from political stakeholders will continue to be part of that City's rate adjustment process going forward.

"Limited exposure to financial operations of the general government, so that system revenues can be relied upon for use to operate and improve the utility. For transfers to the general fund policies that specifically limit their scope and growth are favorable."

The City is taking steps to improve consistency with this BMP. It is our understanding that approximately $10 million is due from the City's general fund to the water and wastewater utilities. A potential course of action would be to reduce the amount of administrative fees the water and wastewater utilities pay each year to the general fund, until the amount owed is paid back in full. Regardless of the method, the City has indicated that, as a worst case scenario, the general fund would repay the amount owed to the water and wastewater utilities by FY 2019.

"Compliance with industry accounting practices and establishment of appropriate internal controls."

It is our understanding that the City's accounting practices adhere to the generally accepted accounting practices ("GAAP") set forth by the Governmental Accounting Standards Board ("GASB").

"Rate affordability guidelines that consider absolute levels of rates and their affordability relative to income levels."

The City is working to improve consistency with this BMP. Affordability is a critical consideration for the City especially given the relatively high level of existing rates. As mentioned above, a key component of this study involved analyzing the impact of transitioning from DWSD to the KWA, a policy which should generate savings to ratepayers in lieu of what would have happened had the City continued to purchase water from DWSD.

6.2 DEBT PROFILE RELATED

"Prioritized capital improvement plans that cover at least five years and consider capacity, supply, regulatory and replacement and renewal needs."

The City's practices are consistent with this BMP. The City has provided five year capital improvements plans for the water and wastewater utilities as well as guidance for forecasting beyond that period, both of which have been incorporates into the water and wastewater financial plans. Based on our experience with utility operations and an examination of the provided plans, it is our opinion that the City is working to address capacity, supply and regulatory issues.

"Debt issuance policies including types, terms, and suitability under specific conditions, as well as the amount of variable-rate debt deemed appropriate."

Currently the City's wastewater utility has no debt and the level of water utility relatively modest. Though the debt associated with the joining KWA will increase this amount in the coming years, it will not reach unsustainable levels.

"Development of comprehensive policies on the use of hedge agreements and their disclosure prior to entering into any such agreements."

The water and wastewater utilities are not currently party to any such agreements and there are no plans to utilize such agreements in the future.

6.3 OPERATING PROFILE RELATED

"Key management industry experience and active participation in organizations that keep pace with sector issues, regulatory mandates and technological advances."

The City's practices are consistent with BMP in this regard.

"Use of professional engineers, either within the utility or outside of it, to prepare objective reviews of system performance and needs on regular basis and provide periodic revisions to construction cost estimates."

The City's practices are consistent with BMP in this regard.

"Regular consultation with regional and local growth planners, community development officials, and demographers to predict and, if possible, limit infrastructure needs related to population and business growth."

The City has been very active in such activities in recent years, as evidenced by their participation in the KWA effort to secure a more economical source of water to better meet the City's needs in the future.

APPENDICES

APPENDIX A: ALTERNATIVE WATER VOLUMETRIC RATES

	% Allocation of Costs to Blocks			Allocation of Cost Components to Blocks			Test Year	M/D Differential			Block Rate Calculations				
	Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Consumption By Block CCF	Test Year Differential Times Inside City	Test Year Adjusted Consumption CCF	Test Year Composite Consumption CCF	Test Year Proposed Steepness	Existing Rates	Test Year FY 2015 Proposed Block Rates $	Difference $	Difference %
RATE DESIGN BY CUSTOMER CLASS															
Inside City Residential															
Inside City Block 1	100%	65%	50%	$ 1,000,619	$ 7,400,474	$ 300,545	1,025,910	1.000	1,025,910	1,025,790	1.30	$ 7.52	$ 6.50	$ (1.02)	-14%
Inside City Block 2		15%	5%	$ -	$ 1,017,500	$ 30,054	90,299	1.000	90,299	89,924	1.25	$ 7.31	$ 6.25	$ (1.06)	-15%
Inside City Block 3	0%	0%	45%	$ -	$ -	$ 270,490	31,020	1.000	31,020	31,020	1.00	$ 5.79	$ 5.00	$ (0.79)	-14%
	100%	100%	100%	$ 1,000,619	$ 8,700,440	$ 610,008	1,745,505		1,745,505	1,797,703					
Outside City Residential															
Outside City Block 1	100%	65%	50%	$ 7,017	$ 45,590	$ 1,094	7,229	1.500	10,843		1.30	$ 11.26	$ 9.74	$ (1.50)	-13%
Outside City Block 2		15%	5%	$ -	$ 9,046	$ 108	804	1.500	1,205		1.25	$ 10.77	$ 9.37	$ (1.39)	-13%
Outside City Block 3	0%	0%	45%	$ -	$ -	$ 1,625	-	1.500	-		1.00	$ 9.00	$ 7.90	$ (1.10)	-14%
	100%	100%	100%	$ 7,017	$ 50,642	$ 3,008	11,122		12,100						
Total Residential															
Inside City Commercial/Industrial															
Inside City Block 1	100%	65%	50%	$ 3,958,400	$ 7,042,174	$ 277,702	111,702	1.000	111,702	116,660	1.30	7.518	$ 9.57	$ 2.05	27%
Inside City Block 2		15%	5%	$ -	$ 1,242,737	$ 27,770	860,757	1.000	860,757	895,167	1.25	7.31	$ 9.20	$ 1.89	26%
Inside City Block 3	0%	0%	45%	$ -	$ -	$ 250,013	511,780	1.000	511,780	531,822	1.00	5.702	$ 7.35	$ 1.57	27%
	100%	100%	100%	$ 3,958,400	$ 8,284,911	$ 555,585	1,484,230		1,484,230	1,523,650					
Outside City Commercial/Industrial															
Outside City Block 1	100%	65%	50%	$ 68,646	$ 166,617	$ 5,032	3,218	1.500	4,948		1.30	11.259	$ 14.35	$ 3.10	27%
Outside City Block 2		15%	5%	$ -	$ 20,226	$ 503	9,607	1.500	14,410		1.25	10.765	$ 13.80	$ 3.04	28%
Outside City Block 3	0%	0%	45%	$ -	$ -	$ 5,338	13,061	1.500	20,042		1.00	8.677	$ 11.04	$ 2.37	27%
	100%	100%	100%	$ 68,646	$ 184,843	$ 11,863	25,286		30,400						
Total Commercial/Industrial															
Inside City Lawn															
Inside City Block 1	100%	65%	50%	$ 22,120	$ 251,357	$ 7,113	5,504	1.000	5,504	5,504	1.30	7.518	$ 27.01	$ 19.49	259%
Inside City Block 2		15%	5%	$ -	$ 44,428	$ 711	7,082	1.000	7,082	7,082	1.25	7.31	$ 25.97	$ 18.65	255%
Inside City Block 3	0%	0%	45%	$ -	$ -	$ 6,402	-	1.000	-	-	1.00	5.702	$ 20.77	$ 14.98	263%
Outside City Lawn															
Outside City Block 1	100%	65%	50%	$ -	$ -	$ -	-	1.500	-		1.30	11.259	$ 40.51	$ 29.25	260%
Outside City Block 2		15%	5%	$ -	$ -	$ -	-	1.500	-		1.25	10.765	$ 38.95	$ 28.19	262%
Outside City Block 3	0%	0%	45%	$ -	$ -	$ -	-	1.500	-		1.00	8.677	$ 31.16	$ 22.48	259%
	100%	100%	100%	$ -	$ -	$ -	$ -		-						
Total Lawn															

APPENDIX B: ALTERNATIVE WASTEWATER VOLUMETRIC RATES

	Composite Revenue Requirement	Test Year Volumes					Test Year Rate Calculation			
		Test Year Billed Volumes CCF	Test Year Billed Volumes % Breakdown	Test Year Differential ____ Times Inside City	Test Year Adjusted Consumption CCF	Test Year Composite Consumption CCF	Test Year Volumetric Rates $/CCF	Existing Volumetric Rates $/CCF	Difference $	Difference %
RATE DESIGN BY CUSTOMER CLASS										
Total Inside City Residential COS										
Total Inside City Residential COS Adjustment										
Total Inside City Residential	$ 5,809,328	1,576,666	52.88%	1.000	1,576,666	1,576,892	$ 3.49	4.8	$ (1.31)	-27%
Total Outside City Residential COS										
Total Outside City Residential COS Adjustment										
Total Outside City Residential		241	0.01%	1.111	264		$ 3.814	5.245	$ (1.44)	-27%
Total Inside City Commercial/Industrial COS										
Total Inside City Commercial/Industrial COS Adjustment										
Total Inside City Commercial/Industrial	$ 9,908,586	1,398,721	46.90%	1.000	1,398,721	1,406,434	$ 7.05	4.8	$ 2.25	47%
Total Outside City Commercial/Industrial COS										
Total Outside City Commercial/Industrial COS Adjustment										
Total Outside City Commercial/Industrial		7,012	0.24%	1.100	7,713		$ 7.75	5.295	$ 2.45	47%

From: Muchmore, Dennis (GOV)
Sent: Wednesday, February 11, 2015 3:50 PM
To: Muchmore, Dennis (GOV)
Subject: Fwd: Flint water
Attachments: Flint Rate Study Report Final Draft v6.docx

>
> Subject: Re: FW: Flint water
>
> We followed the recommendations of the RFC rate study. Their recommendations encompassed the knowledge of leaving DWSD, as well as the impending increase in costs associated with KWA once connected (City share of debt service), and the need for significant reinvestment in the utility system infrastructure, and a desire to level out future rate increases.
>
> Copy of the RFC study attached.
>
> Jerry
>
>
>
>
>

RAFTELIS
FINANCIAL CONSULTANTS, INC.

CITY OF FLINT

Water and Wastewater Rate Study

Final Report |June 19, 2014

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1. EXECUTIVE SUMMARY

1.1 BACKGROUND OF THE STUDY

On November of 2013, the City of Flint ("City") engaged Raftelis Financial Consultants ("RFC") to perform water and wastewater utility rate studies. The scope of services included the following:

- Evaluate the adequacy of existing water and wastewater revenues to meet each utility's projected revenue requirements
- Develop comprehensive water and wastewater financial plans based on sound financial management practices for a 10 year forecast period
- Determine water and wastewater rates which adequately recover the cost of operating the water and wastewater utilities under the existing rate structures and provide alternatives based on a comprehensive cost of service study
- Analyze the impact of transitioning from the use of purchased potable water from the Detroit Water and Sewerage District ("DWSD") to the treatment of raw water from the Karegnondi Water Authority ("KWA").
- Review the City's water and wastewater operations in comparison to Best Management Practices criteria.

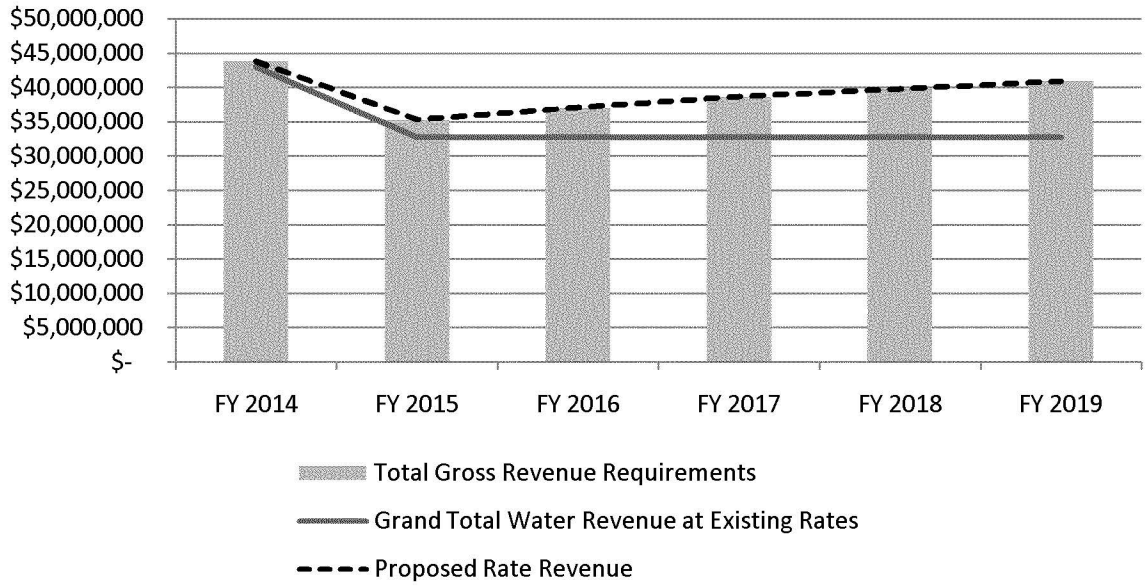
1.2 ADEQUACY OF EXISTING WATER AND WASTEWATER REVENUES

Charts ES-1 and 2 below summarize our conclusions with respect to the adequacy of water and wastewater revenue at existing rates. As the charts indicate, beginning in FY 2015, water and wastewater utility revenues are insufficient to recover each utility's revenue requirement. Key drivers of this disparity are:

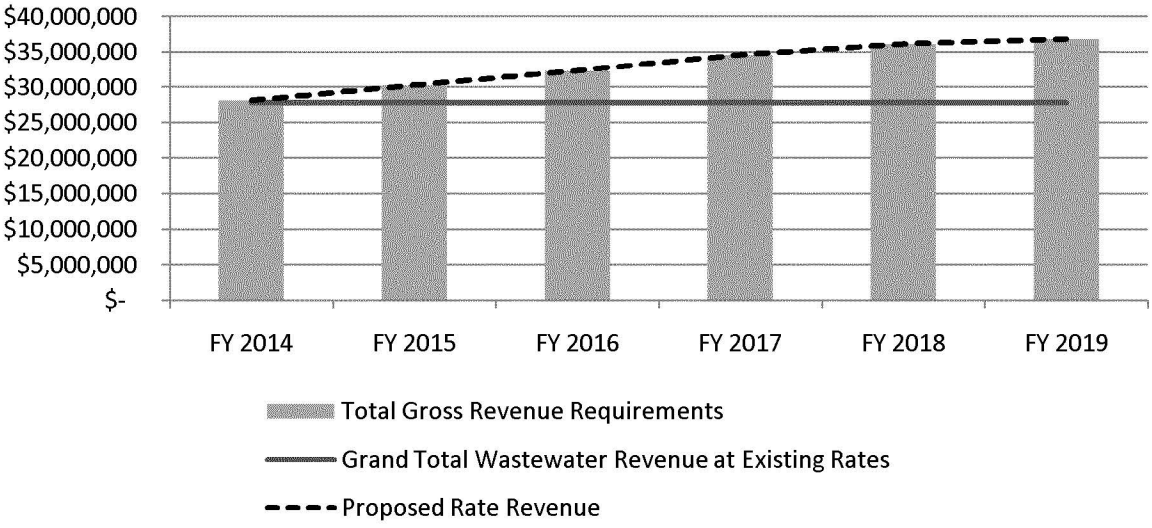
- A marked decrease in billed usage, the cause of which is currently being evaluated by RFC under a separate contract.
- A normal pattern of declining per customer usage for both utilities overall due to conservation, efficient appliances, etc.
- Increases in utility revenue requirements associated with the financial plans including operating cost inflation, capital improvements and policies which support the sound financial management of each utility in accordance with best management practices.

Consequently, the proposed increases in rate revenue are necessary to ensure each utility can adequately fund its operation and maintenance expenditures, make payments on existing debt service, provide funding for needed capital improvements and ensure adequate operating reserves.

ES-1: Water Utility Revenues at Existing Rates



ES-2: Wastewater Utility Revenues at Existing Rates



1.3 WATER AND WASTEWATER FINANCIAL PLANS

Tables ES-3 and ES-4 below summarize the proposed water and wastewater financial plans and rate revenue increases for the first 5 years of the forecast period.

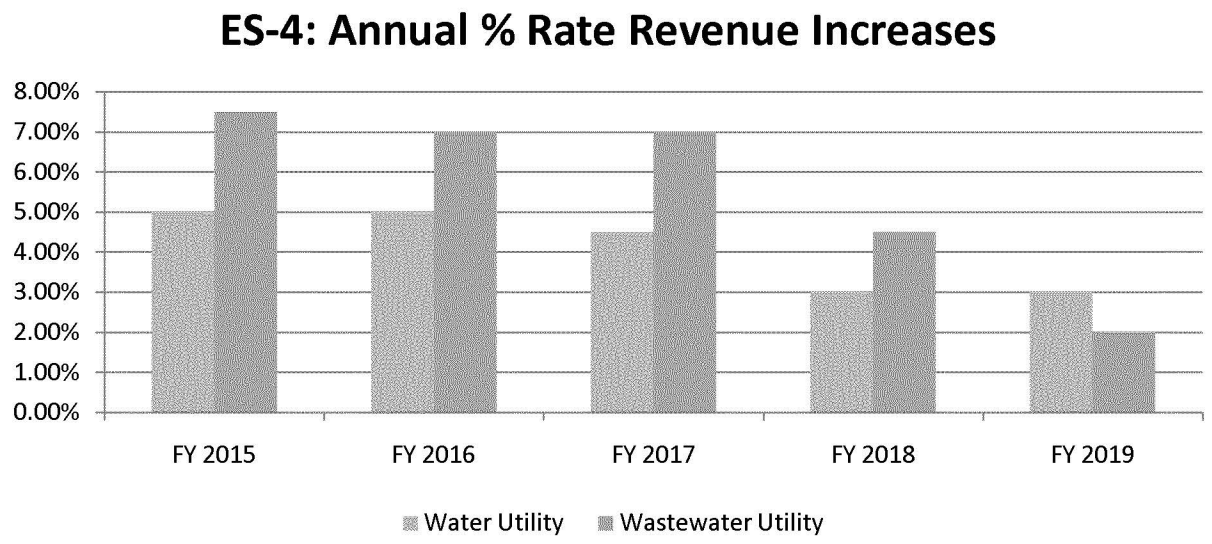
The financial plans and proposed increased in rate revenues are driven by the following factors:

- Inflationary increases in O&M expenditures for both utilities
- For the water utility:
    - Decreases in revenues associated with the cessation of service to Genesee County
    - Decreases in O&M expenditures associated with an elimination of DWSD water purchases
    - Increases in O&M expenditures associated with transitioning from back-up to primary operation of the Flint WTP
    - Increases in capital expenditures associated with improvements to the Flint WTP in preparation for the treatment of raw water from KWA
    - Increases in debt service associated with Flint's share of projected KWA debt service
- Necessary cash funded recapitalization of wastewater utility assets
- A build-up, for each utility, of operating reserves equivalent to 90 days of projected O&M expenditures and debt service payments, the minimum, according to financial management practices ("BMP").

ES-3: SUMMARY OF WATER AND WASTEWATER FINANCIAL PLANS

Water Utility	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019
REVENUES						
Grand Total Water Revenue at Existing Rates	$ 42,074,374	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575
Additional Revenue from Rate Increases	$ -	$ 1,638,100	$ 3,358,100	$ 4,983,900	$ 6,115,900	$ 7,282,300
Total Non-Rate Revenues	$ 000,000	$ 913,014	$ 931,644	$ 927,000	$ 930,000	$ 929,131
Add Transfers in from General Fund	$	$	$	$	$	
Total Rate and Non-Rate Revenues	$ 43,860,374	$ 35,313,989	$ 37,052,318	$ 38,673,761	$ 39,808,978	$ 40,974,006
GROSS REVENUE REQUIREMENTS						
O&M	$ 36,865,206	$ 21,483,441	$ 22,140,012	$ 23,316,857	$ 23,900,504	$ 24,705,148
Capital	$ 9,747,946	$ 11,742,821	$ 11,245,423	$ 16,148,146	$ 15,644,008	$ 16,143,195
Transfer to Operating Reserve	$ (2,752,778)	$ 2,087,727	$ 3,665,883	$ (791,542)	$ 161,466	$ 125,662
Total Gross Revenue Requirements	$ 43,860,374	$ 35,313,989	$ 37,052,318	$ 38,673,761	$ 39,806,978	$ 40,974,006
DEFICIT (EXISTING REVENUES - REVENUE REQ.)	$ -	$ (1,400,100)	$ (3,350,100)	$ (4,900,300)	$ (6,115,900)	$ (7,282,300)

Wastewater Utility	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019
REVENUES						
Grand Total Wastewater Revenue at Existing Rates	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374
Additional Revenue from Rate Increases	$	$ 2,053,300	$ 4,173,900	$ 6,410,100	$ 7,948,900	$ 8,853,000
Total Non-Rate Revenues	$ 395,872	$ 423,962	$ 431,948	$ 426,098	$ 422,741	$ 419,354
Add Transfers in from General Fund	$ -	$ -	$ -	$ -	$ -	
Total Rate and Non-Rate Revenues	$ 28,173,246	$ 30,254,637	$ 32,377,223	$ 34,613,572	$ 36,149,015	$ 37,049,728
GROSS REVENUE REQUIREMENTS						
O&M	$ 24,329,627	$ 23,053,392	$ 23,394,871	$ 24,081,988	$ 24,812,101	$ 25,557,113
Capital	$ 5,500,000	$ 7,000,000	$ 9,500,000	$ 9,500,000	$ 12,000,000	$ 8,000,000
Transfer to Operating Reserve	$ (1,656,381)	$ 200,845	$ (522,848)	$ 1,021,963	$ (663,086)	$ 3,322,615
Total Gross Revenue Requirements	$ 28,173,246	$ 30,254,237	$ 32,377,023	$ 34,613,952	$ 36,149,015	$ 36,879,728
DEFICIT (EXISTING REVENUES - REVENUE REQ.)	$ -	$ (2,053,300)	$ (4,173,900)	$ (6,410,100)	$ (7,948,900)	$ (8,853,000)



As indicated in the previous section, water and wastewater utility revenues at existing rates are not adequate to recover the projected costs each utility will incur over the forecast period. Consequently additional rate revenue will be needed to ensure adequate recovery of each utility's revenue requirements.

1.4 COST OF SERVICE STUDY AND WATER AND WASTEWATER RATES

Table ES-5 below summarizes the results of the water and wastewater cost of service studies. The customer classes included are those which are recognized in the City's existing customer information system ("CIS"). While the City does not currently have either a water or wastewater rate structure which recognizes these customer classes, rates by customer class have been calculated and are included as appendices A and B to this report. The totals for each customer class represent the contribution of that class to the overall costs of each utility. This is based on the allocation processes described in sections 4 and 5 of this report.

Given the transition from KWA to DWSD the City will not be making any rate structure changes at this time. It is our opinion that the current water and wastewater rate structures are reasonable. The declining block water rates generally recognizing the fact that higher volume customers (i.e. large commercial and industrial) contribute less to peak demand, and overall water utility costs. Additionally, the relatively high proportion of fixed charge revenue recovery provides a less climatically variable revenue stream, which given that the majority of the utility's costs are fixed, is entirely appropriate.

ES-5: SUMMARY OF COST OF SERVICE STUDY RESULTS

CUSTOMER CLASS	WATER	WASTEWATER
Allocated Cost of Service		
Total Inside City Residential COS	$ 18,345,672	$ 16,412,799
Total Inside City Commercial/Industrial COS	$ 15,263,704	$ 13,378,697
Total Inside City Lawn COS	$ 370,646	N/A
Total Inside City COS	$ 33,980,022	$ 29,791,496
Total Outside City Residential COS	$ 99,483	$ 2,382
Total Outside City Commercial/Industrial COS	$ 321,169	$ 66,796
Total Outside City Lawn COS	$ -	N/A
Total Outside City COS	$ 420,653	$ 69,178
Total System Cost of Service	$ 34,400,675	$ 29,860,674

Tables ES-6 and ES-7 summarize the projected fixed and volumetric rates for the first 5 years of the forecast period, given financial plans and rate revenue increases proposed above. For every dollar of rate revenue generated by each utility approximately $.66 is derived from volumetric charges and $.34 is derived from fixed charges.

It is typical for water and wastewater utilities to design fixed charges which recover, at a minimum, the costs of meter reading, billing and collection and customer service. Additionally, fixed charges may also relate to fixed investment in utility assets associated with providing service which is available at all times regardless of usage levels by City customers. These costs, known as readiness to serve costs, have also been incorporated into the water and wastewater fixed charges.

Volumetric rates recover the variable costs associated with operating the water and wastewater utilities. For the water utility variable costs are associated with water treatment, transmission and distribution, pumping, and storage and are driven primarily by the design requirements associated with peak water usage. For the wastewater utility variable costs are associated with wastewater treatment, collection, and pumping, and are driven by the wastewater volume and strength.

ES-6: SUMMARY OF WATER AND WASTEWATER VOLUMETRIC RATES

Water Volumetric Rates

CUSTOMER CLASS	CONSUMPTION BLOCK	UNITS	FY 2014 Existing Block Rates	Test-Year FY 2015 Proposed Block Rates	Forecast FY 2016 Proposed Block Rates	Forecast FY 2017 Proposed Block Rates	Forecast FY 2018 Proposed Block Rates	Forecast FY 2019 Proposed Block Rates
Annual % Increase in Rate Revenues			**0.00%**	**5.00%**	**5.00%**	**4.50%**	**3.00%**	**3.00%**
Total Inside City All Classes								
Inside City Block 1	0-35 CCF	($/CCF)	$ 7.52	$ 7.92	$ 8.32	$ 8.69	$ 8.95	$ 9.22
Inside City Block 2	36-2000 CCF	($/CCF)	$ 7.31	$ 7.62	$ 8.00	$ 8.36	$ 8.61	$ 8.87
Inside City Block 3	above 2000 CCF	($/CCF)	$ 5.79	$ 6.09	$ 6.40	$ 6.69	$ 6.89	$ 7.09
Total Outside City All Classes								
Outside City Block 1	0-35 CCF	($/CCF)	$ 11.26	$ 11.88	$ 12.48	$ 13.04	$ 13.43	$ 13.83
Outside City Block 2	36-2000 CCF	($/CCF)	$ 10.77	$ 11.42	$ 12.00	$ 12.54	$ 12.91	$ 13.30
Outside City Block 3	above 2000 CCF	($/CCF)	$ 8.68	$ 9.14	$ 9.60	$ 10.03	$ 10.33	$ 10.64

Wastewater Volumetric Rates

CUSTOMER CLASS	UNITS	FY 2014 Existing Rates	Test-Year FY 2015 Proposed Rates	Forecast FY 2016 Proposed Rates	Forecast FY 2017 Proposed Rates	Forecast FY 2018 Proposed Rates	Forecast FY 2019 Proposed Rates
Annual % Increase in Rate Revenues		**0.00%**	**7.50%**	**7.00%**	**7.00%**	**4.50%**	**2.00%**
Total Inside City All Classes	($/CCF)	$ 4.80	$ 5.17	$ 5.53	$ 5.92	$ 6.18	$ 6.31
Total Outside City All Classes	($/CCF)	$ 5.29	$ 5.68	$ 6.08	$ 6.51	$ 6.80	$ 6.94

ES-7: SUMMARY OF WATER AND WASTEWATER FIXED CHARGES

	WATER FIXED CHARGES						WASTEWATER FIXED CHARGES					
CUSTOMER CLASS	FY 2014 Existing Charge	Test Year FY 2015 Proposed Charge	Forecast FY 2016 Proposed Charge	Forecast FY 2017 Proposed Charge	Forecast FY 2018 Proposed Charge	Forecast FY 2019 Proposed Charge	FY 2014 Existing Charge	Test Year FY 2015 Proposed Charge	Forecast FY 2016 Proposed Charge	Forecast FY 2017 Proposed Charge	Forecast FY 2018 Proposed Charge	Forecast FY 2019 Proposed Charge
Inside City Residential												
5/8"	$ 21.78	$ 22.90	$ 24.05	$ 25.13	$ 25.89	$ 26.66	$ 32.00	$ 34.48	$ 36.90	$ 38.48	$ 41.26	$ 42.08
3/4"	$ 41.86	$ 44.03	$ 46.23	$ 48.31	$ 49.76	$ 51.25	$ 46.92	$ 50.55	$ 54.10	$ 57.89	$ 60.49	$ 61.70
1"	$ 55.28	$ 58.15	$ 61.05	$ 63.80	$ 65.72	$ 67.69	$ 66.34	$ 70.41	$ 75.30	$ 80.61	$ 84.24	$ 85.92
1-1/2"	$ 55.28	$ 58.15	$ 61.05	$ 63.80	$ 65.72	$ 67.69	$ 66.34	$ 70.41	$ 75.30	$ 80.61	$ 84.24	$ 85.92
2"	$ 55.28	$ 58.15	$ 61.05	$ 63.80	$ 65.72	$ 67.69	$ 66.34	$ 70.41	$ 75.30	$ 80.61	$ 84.24	$ 85.92
Inside City Commercial												
5/8"	$ 59.39	$ 55.79	$ 58.58	$ 61.21	$ 63.05	$ 64.94	$ 5.92	$ 55.90	$ 59.8	$ 64.00	$ 66.88	$ 68.21
3/4"	$ 61.36	$ 64.02	$ 67.22	$ 70.25	$ 72.35	$ 74.52	$ 6.43	$ 68.37	$ 74.20	$ 79.42	$ 83.00	$ 84.66
1"	$ 75.10	$ 78.48	$ 82.41	$ 86.11	$ 88.70	$ 91.36	$ 8.71	$ 91.20	$ 97.58	$ 104.41	$ 109.11	$ 111.29
1-1/2"	$ 107.76	$ 112.61	$ 118.23	$ 123.55	$ 127.26	$ 131.08	$ 13.84	$ 148.41	$ 158.79	$ 169.91	$ 177.55	$ 181.10
2"	$ 150.62	$ 157.40	$ 165.27	$ 172.71	$ 177.89	$ 183.22	$ 196.16	$ 211.19	$ 225.9	$ 241.79	$ 252.67	$ 257.73
3"	$ 297.45	$ 310.83	$ 326.37	$ 341.05	$ 351.28	$ 361.83	$ 438.06	$ 471.62	$ 504.6	$ 539.95	$ 564.26	$ 575.55
4"	$ 523.50	$ 547.05	$ 574.40	$ 600.25	$ 618.26	$ 636.81	$ 72.84	$ 777.14	$ 831.5	$ 889.75	$ 929.79	$ 948.39
6"	$ 1,029.43	$ 1,075.75	$ 1,129.54	$ 1,180.37	$ 1,215.78	$ 1,252.25	$ 1,459.56	$ 1,571.80	$ 1,681.82	$ 1,799.55	$ 1,880.53	$ 1,918.14
8"	$ 1,492.88	$ 1,560.05	$ 1,638.05	$ 1,711.77	$ 1,763.12	$ 1,816.01	$ 2,148.21	$ 2,312.79	$ 2,474.68	$ 2,647.91	$ 2,767.07	$ 2,822.41
10"	$ 2,060.75	$ 2,153.48	$ 2,261.16	$ 2,362.91	$ 2,433.80	$ 2,506.81	$ 2,918.39	$ 3,141.97	$ 3,361.9	$ 3,597.24	$ 3,759.12	$ 3,834.30
12"	$ 2,499.12	$ 2,605.31	$ 2,735.57	$ 2,858.67	$ 2,944.43	$ 3,032.77	$ 3,426.29	$ 3,688.72	$ 3,946.90	$ 4,223.22	$ 4,413.26	$ 4,501.52
16"	$ 3,102.64	$ 3,242.25	$ 3,404.36	$ 3,557.55	$ 3,664.28	$ 3,774.21	$ 4,520.95	$ 4,870.53	$ 5,211.4	$ 5,576.27	$ 5,827.20	$ 5,943.74
20"	$ 3,351.18	$ 3,501.98	$ 3,677.08	$ 3,842.54	$ 3,957.82	$ 4,076.55	$ 5,336.87	$ 5,734.95	$ 6,136.4	$ 6,566.95	$ 6,861.42	$ 6,998.65
Outside City Residential												
5/8"	$ 32.68	$ 34.17	$ 35.87	$ 37.49	$ 38.61	$ 39.77	$ 4.01	$ 44.19	$ 47.28	$ 50.59	$ 52.87	$ 53.93
3/4"	$ 62.71	$ 65.56	$ 68.85	$ 72.01	$ 74.54	$ 76.78	$ 95.01	$ 60.36	$ 64.6	$ 69.09	$ 72.20	$ 73.64
1"	$ 82.79	$ 87.08	$ 91.43	$ 95.65	$ 98.42	$ 101.37	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23
1-1/2"	$ 82.79	$ 87.08	$ 91.43	$ 95.65	$ 98.42	$ 101.37	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23
2"	$ 82.79	$ 87.08	$ 91.43	$ 95.65	$ 98.42	$ 101.37	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23
Outside City Commercial												
5/8"	$ 80.13	$ 83.74	$ 87.99	$ 91.88	$ 94.64	$ 97.48	$ 58.12	$ 62.57	$ 66.95	$ 71.64	$ 74.85	$ 76.36
3/4"	$ 91.72	$ 95.84	$ 100.63	$ 105.16	$ 108.32	$ 111.57	$ 70.62	$ 79.26	$ 84.8	$ 90.75	$ 94.83	$ 96.73
1"	$ 112.67	$ 117.74	$ 123.63	$ 129.19	$ 133.07	$ 137.06	$ 98.05	$ 105.55	$ 112.95	$ 120.86	$ 126.30	$ 128.82
1-1/2"	$ 161.79	$ 169.05	$ 177.52	$ 185.51	$ 191.07	$ 196.80	$ 164.80	$ 177.43	$ 189.86	$ 203.14	$ 212.28	$ 216.52
2"	$ 226.09	$ 236.26	$ 248.07	$ 259.24	$ 267.01	$ 275.02	$ 232.43	$ 250.24	$ 267.76	$ 286.50	$ 299.39	$ 305.38
3"	$ 448.47	$ 468.65	$ 492.08	$ 514.23	$ 529.65	$ 545.54	$ 522.87	$ 562.91	$ 602.31	$ 644.49	$ 673.51	$ 686.97
4"	$ 786.37	$ 821.71	$ 861.74	$ 900.52	$ 927.53	$ 955.36	$ 866.01	$ 953.89	$ 1,020.66	$ 1,092.10	$ 1,141.25	$ 1,164.07
6"	$ 1,540.87	$ 1,610.34	$ 1,690.00	$ 1,770.23	$ 1,823.34	$ 1,878.04	$ 1,770.13	$ 1,905.74	$ 2,039.1	$ 2,181.88	$ 2,280.07	$ 2,325.67
8"	$ 2,239.47	$ 2,340.24	$ 2,457.26	$ 2,567.83	$ 2,644.87	$ 2,724.21	$ 2,646.52	$ 2,849.27	$ 3,048.72	$ 3,262.13	$ 3,408.59	$ 3,477.11
10"	$ 3,107.46	$ 3,247.30	$ 3,409.67	$ 3,563.10	$ 3,670.00	$ 3,780.10	$ 3,522.54	$ 3,792.41	$ 4,057.88	$ 4,341.93	$ 4,537.31	$ 4,628.06
12"	$ 3,739.51	$ 3,907.77	$ 4,103.16	$ 4,287.80	$ 4,416.44	$ 4,548.93	$ 4,132.57	$ 4,449.17	$ 4,760.62	$ 5,093.85	$ 5,323.08	$ 5,429.54
16"	$ 4,653.87	$ 4,863.28	$ 5,105.44	$ 5,336.23	$ 5,496.32	$ 5,661.21	$ 5,491.91	$ 5,919.11	$ 6,333.46	$ 6,776.79	$ 7,081.75	$ 7,223.38
20"	$ 5,463.82	$ 5,709.67	$ 5,995.16	$ 6,264.94	$ 6,452.89	$ 6,646.48	$ 6,532.02	$ 7,032.44	$ 7,524.72	$ 8,051.45	$ 8,413.76	$ 8,582.04

1.5 TRANSITION FROM DWSD TO KWA

A key aspect of this study involved analyzing the impact of the anticipated April 1, 2014 transition from the Detroit Water and Sewerage District ("DWSD") to the Karegnondi Water Authority ("KWA"). The expectation is that the transition will strengthen the water utility's financial position going forward, by affording the City greater control over its operating and capital costs. As part of this engagement the City asked RFC to estimate the potential savings to a typical Flint customer as a result of transitioning from DWSD to the KWA.

A summary of the potential savings, based on an alternative water financial planning scenario is summarized in Table ES-8 below. For example, a City customer using 5 CCF per month would see a combined monthly bill of approximately $122.83 under the KWA. This is based on a 5% water rate increase over existing rates. That same customer, should the City continue receiving service from DWSD, is estimated to have a bill of approximately $127.70. This represents estimated 13% water rate increase over existing rates. Consequently, the savings to the typical City is approximately $4.87 per month, or $58.44 per year. Finally, note that the cumulative water rate increase over the next 5 years is estimated to be 18% under the KWA and 41% under DWSD.

ES-8: POTENTIAL RESIDENTIAL BILL SAVINGS (KWA VS. DWSD)

Cumulative Increase KWA (Water Rates)	**0%**	**5%**	**10%**	**15%**	**19%**	**22%**
Additional With DWSD (Water Rates)	**0%**	**9%**	**19%**	**20%**	**21%**	**21%**
Total Under DWSD	**0%**	**14%**	**29%**	**35%**	**39%**	**44%**

RATE IMPACT 5/8" Customer	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Monthly Usage (CCF)						
1	$ 66.10	$ 70.48	$ 74.79	$ 79.22	$ 82.28	$ 84.27
2	$ 78.41	$ 83.57	$ 88.64	$ 93.83	$ 97.41	$ 99.80
3	$ 90.73	$ 96.66	$102.49	$108.44	$112.55	$115.33
4	$103.05	$109.74	$116.33	$123.05	$127.68	$130.85
5	$115.37	$122.83	$130.18	$137.65	$142.82	$146.38
6	$127.69	$135.92	$144.03	$152.26	$157.95	$161.91
7	$140.00	$149.01	$157.88	$166.87	$173.09	$177.44
8	$152.32	$162.10	$171.72	$181.48	$188.23	$192.97
9	$164.64	$175.19	$185.57	$196.09	$203.36	$208.49
10	$176.96	$188.28	$199.42	$210.70	$218.50	$224.02

ESTIMATED MONTHLY SAVINGS	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Monthly Usage (CCF)						
1	$ -	$ (2.42)	$ (5.37)	$ (5.80)	$ (5.98)	$ (6.15)
2	$ -	$ (3.04)	$ (6.74)	$ (7.28)	$ (7.50)	$ (7.72)
3	$ -	$ (3.65)	$ (8.11)	$ (8.76)	$ (9.02)	$ (9.29)
4	$ -	$ (4.26)	$ (9.47)	$ (10.23)	$ (10.54)	$ (10.86)
5	$ -	$ (4.87)	$ (10.84)	$ (11.71)	$ (12.06)	$ (12.42)
6	$ -	$ (5.48)	$ (12.21)	$ (13.19)	$ (13.58)	$ (13.99)
7	$ -	$ (6.09)	$ (13.58)	$ (14.67)	$ (15.11)	$ (15.56)
8	$ -	$ (6.71)	$ (14.94)	$ (16.14)	$ (16.63)	$ (17.13)
9	$ -	$ (7.32)	$ (16.31)	$ (17.62)	$ (18.15)	$ (18.69)
10	$ -	$ (7.93)	$ (17.68)	$ (19.10)	$ (19.67)	$ (20.26)

1.6 WATER AND WASTEWATER UTILITY OPERATIONS AND BEST MANAGEMENT PRACTICES

We reviewed the City's water and wastewater utility performance in relation to Best Management Practices ("BMP") that have been published by Fitch Ratings ("Fitch"). These criteria are used by Fitch when reviewing the performance of a utility as part of the bond rating process. Table ES-9 below summarizes our assessment of the City's water and wastewater utility operations with respect to BMP. The City's operations generally comport with BMP. The City is working to improve consistency in four areas: first, as mentioned above, the financial plans build-up to the minimum recommended 90 operating reserve and should achieve this reserve, all else equal, in the next 5 years. Second, the City is working with RFC, under a separate contract, to identify sources of lost water and wastewater revenue to improve the City's revenue collections, and reduce the cost of utility service theft to paying customers. Third, the City is currently determining arrangements whereby the general fund can repay its obligations to the water and wastewater utilities, ensuring the water and wastewater funds are not subsidizing general government operations going forward. Finally, the transition to KWA will allow the City greater control over its operating and capital costs, and as mentioned above, should result in more affordable rates than the alternative.

ES-9: FITCH BEST MANAGEMENT PRACTICES

Criteria	Consistent	Improving	Inconsistent
Financial Profile			
Financial Forecasting	✖		
Debt Service Coverage and Operating Reserves		✖	
Financial Reporting and Monitoring	✖		
Limited Exposure to Growth Revenues	✖		
Timely Collection of Payment and Penalty Enforcment		✖	
Political Willingness to Adjust Rates	✖		
Limited Exposure to General Govt. Finances		✖	
GAAP Compliance	✖		
Affordability		✖	
Debt Profile			
Prioritized Capital Improvement Plans	✖		
Debt Policy	✖		
Hedge Agreements			
Operating Profile			
Management Experience	✖		
Use of Professional Engineers	✖		
Consultation with Local/Regional Growth Planners	✖		

2. INTRODUCTION AND STUDY OBJECTIVES

2.1 INTRODUCTION

In November of 2013, the City of Flint ("City") engaged Raftelis Financial Consultants ("RFC") to perform water and wastewater utility rate studies. The need for engagement was precipitated by the City's transition from the use of purchased water from the Detroit Water and Sewerage District ("DWSD") to participation in the Karegnondi Water Authority ("KWA") on April 1, 2014. Following the transition, the City will treat raw water from the KWA at its existing water treatment plant, which is currently undergoing the improvements necessary to become the primary source of treated water for the City of Flint. The expectation is that the transition will strengthen the water utility's financial position going forward, affording the City greater control over its operating and capital costs as a result.

From a financial perspective, the following are a few notable aspects of the transition:

- Water Operation and Maintenance ("O&M") expenditures are projected to decrease significantly as the cost of purchasing water from DWSD ceases as of FY 2015,
- Water Capital costs are projected to increase as the City begins paying its share of the Karegnondi Water Authority's debt service and incurs the cost of the necessary water treatment plant improvements.
- Water utility revenues will decrease as the City's wholesale customer, Genesee County ("County"), will no longer be receiving water service from the City as a result of the transition
- Projected water increases under the KWA are projected to be lower than they would have been, had the City continued to purchase water from DWSD
- City of Flint residential customer water bills are projected to be lower under the KWA than if the City had continued to purchase water from DWSD (see Table 1 below).

TABLE 1: ESTIMATED RATE INCREASES (KWA VS. DWSD)

CUMULATIVE % RATE REVENUE INCREASE	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
KWA	0%	5%	10%	15%	19%	22%
DWSD	0%	14%	29%	35%	39%	44%

ESTIMATED MONTHLY SAVINGS	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Monthly Usage (CCF)						
1	$ -	$ (2.42)	$ (5.37)	$ (5.80)	$ (5.98)	$ (6.15)
2	$ -	$ (3.04)	$ (6.74)	$ (7.28)	$ (7.50)	$ (7.72)
3	$ -	$ (3.65)	$ (8.11)	$ (8.76)	$ (9.02)	$ (9.29)
4	$ -	$ (4.26)	$ (9.47)	$ (10.23)	$ (10.54)	$ (10.86)
5	$ -	$ (4.87)	$ (10.84)	$ (11.71)	$ (12.06)	$ (12.42)
6	$ -	$ (5.48)	$ (12.21)	$ (13.19)	$ (13.58)	$ (13.99)
7	$ -	$ (6.09)	$ (13.58)	$ (14.67)	$ (15.11)	$ (15.56)
8	$ -	$ (6.71)	$ (14.94)	$ (16.14)	$ (16.63)	$ (17.13)
9	$ -	$ (7.32)	$ (16.31)	$ (17.62)	$ (18.15)	$ (18.69)
10	$ -	$ (7.93)	$ (17.68)	$ (19.10)	$ (19.67)	$ (20.26)

2.2 RATE STUDY OBJECTIVES

The objectives of this study are as follows:

- Evaluate the adequacy of existing water and wastewater revenues to meet the projected revenue requirements
- Develop comprehensive water and wastewater financial plans based on sound financial management practices for a 10 year forecast period
- Determine water and wastewater rates which adequately recover the cost of operating the water and wastewater utilities under the existing rate structures and provide alternatives based on a comprehensive cost of service study
- Evaluate the City's current financial position and adjust the comprehensive financial plans for both the mid-year transition to the KWA and going forward.

3. WATER AND WASTEWATER UTILITY FINANCIAL PLANS

3.1 THE FINANCIAL PLANNING PROCESS

The general objective of the financial planning process is to arrive at the level of water and wastewater rate revenue required to ensure the financial sustainability of each utility on a going forward basis. This revenue requirement is then distributed to each customer class as part of the cost of service study.

For this study financial plans were developed for the current fiscal year, the test year and a ten-year forecast period. The current year is typically the year in which the study occurs, in this case fiscal year 2014 ("FY 2014"), or the year ending July 30, 2014. For the current year the financial plans represent an estimate, for each utility, of year-end financial position.

This serves as the basis for the test year financial plan. For this study, the test year is the following fiscal year, FY 2015. While the current year serves as an estimate of each utility's current financial position, the test year represents a projection of utility revenues, expenditures and operating reserve levels. The ten-year forecast period allows the City to evaluate trends over time and evaluate the impact of challenges that occur beyond the test year. For the purposes of this study separate financial plans were developed for each utility to ensure that each would be self-sustaining.

The following steps are necessary to arrive at the test year revenue requirement for each utility:

- Forecast customer units of service and revenue at existing water and wastewater rates
- Forecast operation and maintenance expenditures ("O&M") for each utility
- Forecast capital expenditures, including the payment of existing water and wastewater debt service and the financing of planned capital improvements
- Develop detailed cash flow forecasts summarizing planned O&M and capital expenditures, recommended rate revenue increases and operating reserve levels

3.2 WATER UTILITY FINANCIAL PLAN

3.2.1 Forecast Water Units of Service and Revenue at Existing Rates

Water Utility Rates

The City recovers the cost of operating the water utility via volumetric rates (rates based on the amount of water used) and fixed monthly service charges (a charge per customer bill). The City's existing water volumetric charge is a declining block rate, or a rate that decreases on a per unit basis as the amount of water consumed increases. The existing water volumetric rate structure is shown in Table 2 below:

TABLE 2: EXISTING WATER VOLUMETRIC RATES

CUSTOMER CLASS	CONSUMPTION BLOCK	UNITS	FY 2014 Existing Block Rates
Total Inside City All Classes			
Inside City Block 1	0-35 CCF	($/CCF)	$ 7.52
Inside City Block 2	36-2000 CCF	($/CCF)	$ 7.31
Inside City Block 3	above 2000 CCF	($/CCF)	$ 5.79
Total Outside City All Classes			
Outside City Block 1	0-35 CCF	($/CCF)	$ 11.26
Outside City Block 2	36-2000 CCF	($/CCF)	$ 10.77
Outside City Block 3	above 2000 CCF	($/CCF)	$ 8.68

A distinction is made between customers residing within in the City of Flint, and those who receive City water service, but do not reside within the City. As Table 2 indicates, outside city volumetric rates are approximately 150% of inside city volumetric rates. This is a common policy for municipal water utilities and recognizes inside city customers as "owners" of the utility, who should be compensated for the risk of investing in and maintaining their utility system.

In addition to the volumetric rates, the existing water rate structure includes a fixed service charge which varies by customer water meter size. The rates are charged per customer bill and are shown in Table 3 on the following page.

TABLE 3: EXISTING WATER FIXED CHARGES

CUSTOMER CLASS	FY 2014 Proposed Fixed Charge
Inside City Residential Customers	
5/8"	$ 21.78
3/4"	$ 41.86
1"	$ 55.20
1-1/2"	$ 55.28
2"	$ 55.28
Inside City Commercial/Industrial Customers	
5/8"	$ 53.39
3/4"	$ 81.26
1"	$ 75.10
1-1/2"	$ 107.76
2"	$ 150.62
3"	$ 297.45
4"	$ 523.50
6"	$ 1,029.43
8"	$ 1,492.88
10"	$ 2,080.75
12"	$ 2,493.12
16"	$ 3,102.64
20"	$ 3,351.18
Outside City Residential Customers	
5/8"	$ 32.48
3/4"	$ 62.71
1"	$ 82.79
1-1/2"	$ 82.79
2"	$ 82.79
Outside City Commercial/Industrial Customers	
5/8"	$ 80.13
3/4"	$ 81.72
1"	$ 112.67
1-1/2"	$ 161.79
2"	$ 226.09
3"	$ 448.47
4"	$ 785.37
6"	$ 1,543.87
8"	$ 2,239.47
10"	$ 3,107.48
12"	$ 3,739.51
16"	$ 4,653.87
20"	$ 5,453.82

Most Flint residential customers have a 5/8" meter and currently pay the $21.78 fixed monthly service charge. For the monthly fixed charge the same distinction is made between inside and outside city customers, with the outside city charge set at approximately 150% of the inside city

charge. Additionally, the current fixed charge structure further distinguishes between residential commercial customers.

In addition to the retail rates discussed above, the City currently serves a wholesale water customer, Genesee County. Genesee County pays a commodity charge of $346,863, a fixed monthly service charge of $114,000 and a volumetric rate of $1.30 per CCF. As mentioned above, as of April 1, 2014, the County will no longer be a customer of the City.

Forecast Water Units of Service

In order to forecast the level of revenue under existing water rates, the number of water accounts at each meter size and the level of water consumption in each consumption block must be estimated for the forecast period.

The number of accounts at each meter size was determined by dividing the number of annual bills at each meter size by the 12 monthly billing periods. The number of historical and forecast water utility customer accounts, by meter size, is indicated in Tables 4 and 5 on the following two pages. Note that the historical data appear to indicate a 14% increase in inside city accounts and a 27% increase in outside city accounts from FY 2012 to FY 2013. This increase in accounts does not appear to have been sustained into FY 2014. The City has indicated that water and wastewater billings have decreased approximately 12% from FY 2013 to FY 2014 year to date. Given this change and for the sake of developing a conservative estimate we have adjusted the forecast level of water accounts to 13% below their FY 2013 level. As no significant growth in the City's customer base is expected, no growth in water utility accounts has been projected over the forecast period.

TABLE 4: FORECAST INSIDE CITY WATER ACCOUNTS

Customer Class	Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Inside City Residential														
5/8"	25,003	28,480	24,777	24,777	24,777	24,777	24,777	24,777	24,777	24,777	24,777	24,777	24,777	24,777
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	272	338	294	294	294	294	294	294	294	294	294	294	294	294
1-1/2"	26	39	29	29	29	29	29	29	29	29	29	29	29	29
2"	9	11	9	9	9	9	9	9	9	9	9	9	9	9
Unmetered			-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Residential Remote	25,310	28,862	25,110	25,110	25,110	25,110	25,110	25,110	25,110	25,110	25,110	25,110	25,110	25,110
Inside City Commercial/Industrial														
5/8"	362	409	365	365	365	365	365	365	365	365	365	365	365	365
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	245	281	244	244	244	244	244	244	244	244	244	244	244	244
1-1/2"	250	279	242	242	242	242	242	242	242	242	242	242	242	242
2"	250	286	249	249	249	249	249	249	249	249	249	249	249	249
3"	84	95	83	83	83	83	83	83	83	83	83	83	83	83
4"	59	63	55	55	55	55	55	55	55	55	55	55	55	55
6"	36	41	35	35	35	35	35	35	35	35	35	35	35	35
8"	2	2	2	2	2	2	2	2	2	2	2	2	2	2
10"			-	-	-	-	-	-	-	-	-	-	-	-
12"			-	-	-	-	-	-	-	-	-	-	-	-
16"			-	-	-	-	-	-	-	-	-	-	-	-
20"			-	-	-	-	-	-	-	-	-	-	-	-
Unmetered			-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Commercial/Industrial	1,307	1,457	1,288	1,288	1,288	1,288	1,288	1,288	1,288	1,288	1,288	1,288	1,288	1,288
Inside City Lawn														
5/8"	28	35	30	30	30	30	30	30	30	30	30	30	30	30
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	11	13	11	11	11	11	11	11	11	11	11	11	11	11
1-1/2"	4	5	4	4	4	4	4	4	4	4	4	4	4	4
2"	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3"		-	-	-	-	-	-	-	-	-	-	-	-	-
4"		-	-	-	-	-	-	-	-	-	-	-	-	-
6"		-	-	-	-	-	-	-	-	-	-	-	-	-
8"		-	-	-	-	-	-	-	-	-	-	-	-	-
10"		-	-	-	-	-	-	-	-	-	-	-	-	-
12"		-	-	-	-	-	-	-	-	-	-	-	-	-
16"		-	-	-	-	-	-	-	-	-	-	-	-	-
20"		-	-	-	-	-	-	-	-	-	-	-	-	-
Unmetered		-	-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Lawn	43	53	46	46	46	46	46	46	46	46	46	46	46	46
Total Inside City Accounts	26,661	30,372	26,423	26,423	26,423	26,423	26,423	26,423	26,423	26,423	26,423	26,423	26,423	26,423
%Change		14%	-13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

TABLE 5: FORECAST OUTSIDE CITY WATER ACCOUNTS

Customer Class	Historical FY 2012	Historical FY 2013	Budget Yr FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Outside City Residential														
"0		0	-	-	-	-	-	-	-	-	-	-	-	-
"0		0	-	-	-	-	-	-	-	-	-	-	-	-
5/8"	108	114	123	123	123	123	123	123	123	123	123	123	123	123
3/4"		0	-	-	-	-	-	-	-	-	-	-	-	-
"	2	3	3	3	3	3	3	3	3	3	3	3	3	3
1-1/2"		0	-	-	-	-	-	-	-	-	-	-	-	-
2"		0	-	-	-	-	-	-	-	-	-	-	-	-
Immetered		0	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Residential Remote	110	114	125	125	125	125	125	125	125	125	125	125	125	125
Outside City Commercial/Industrial														
"0		-	-	-	-	-	-	-	-	-	-	-	-	-
"0		-	-	-	-	-	-	-	-	-	-	-	-	-
5/8"	14	16	13	13	13	13	13	13	13	13	13	13	13	13
3/4"		-	-	-	-	-	-	-	-	-	-	-	-	-
"	10	12	11	11	11	11	11	11	11	11	11	11	11	11
1-1/2"	3	1	3	3	3	3	3	3	3	3	3	3	3	3
2"	6	7	6	6	6	6	6	6	6	6	6	6	6	6
3"		-	-	-	-	-	-	-	-	-	-	-	-	-
4"	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6"	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8"		-	-	-	-	-	-	-	-	-	-	-	-	-
10"		-	-	-	-	-	-	-	-	-	-	-	-	-
12"		-	-	-	-	-	-	-	-	-	-	-	-	-
16"		-	-	-	-	-	-	-	-	-	-	-	-	-
20"		-	-	-	-	-	-	-	-	-	-	-	-	-
Immetered		-	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Commercial/Industrial	35	40	35	35	35	35	35	35	35	35	35	35	35	35
Outside City Lawn														
"0	0	0	-	-	-	-	-	-	-	-	-	-	-	-
"0	0	0	-	-	-	-	-	-	-	-	-	-	-	-
5/8"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
3/4"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
1-1/2"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
2"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
3"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
4"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
6"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
8"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
10"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
12"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
16"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
20"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Immetered	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Lawn	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Accounts	145	154	160	160	160	160	160	160	160	160	160	160	160	160
%Change		27%	-13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

In addition to forecasting the number of accounts by meter size, the level of water consumption in each consumption block must be estimated for the forecast period. The historical and forecast level of water consumption by customer class and block is indicated in Tables 6 and 7 on the following two pages.

Note that—consistent with the significant increase in inside city water accounts in FY 2013—inside city water consumption has increased significantly in FY 2013 (18%). Given the uncertainty surrounding the increase in billed consumption in FY 2013, and the subsequent decrease in billed revenues in FY 2014, we have forecast retail consumption at 6% below FY 2013 levels for FY 2014, FY 2015 and the remainder of the ten year forecast period.

As noted above, the City anticipates discontinuing DWSD water service as of April 1, 2014. At that point Genesee County will no longer be a wholesale customer of the City. Therefore the forecast of the County's consumption has been adjusted to account for the final 3 months of FY 2014 (i.e. April, May and June) during which the City will not be providing water service to the County.

TABLE 6: FORECAST INSIDE CITY WATER CONSUMPTION

Customer Class		Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Inside City Residential															
Inside City Block 1	0-35	1,540,554	1,728,895	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913	1,625,913
Inside City Block 2	36-2000	74,689	91,254	88,599	88,599	88,599	88,599	88,599	88,599	88,599	88,599	88,599	88,599	88,599	88,599
Inside City Block 3	above 2000		30,003	31,023	31,023	31,023	31,023	31,023	31,023	31,023	31,023	31,023	31,023	31,023	31,023
Total Inside City Residential		1,615,240	1,850,152	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535	1,745,535
Inside City Commercial/Industrial															
Inside City Block 1	0-35	100,192	118,832	111,702	111,702	111,702	111,702	111,702	111,702	111,702	111,702	111,702	111,702	111,702	111,702
Inside City Block 2	36-2000	802,340	915,899	860,757	860,757	860,757	860,757	860,757	860,757	860,757	860,757	860,757	860,757	860,757	860,757
Inside City Block 3	above 2000	368,899	544,447	511,780	511,780	511,780	511,780	511,780	511,780	511,780	511,780	511,780	511,780	511,780	511,780
Total Inside City Commercial/Industrial		1,290,311	1,578,978	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239	1,484,239
Inside City Lawn															
Inside City Block 1	0-35	4,153	5,856	5,504	5,504	5,504	5,504	5,504	5,504	5,504	5,504	5,504	5,504	5,504	5,504
Inside City Block 2	36-2000	5,065	7,534	7,082	7,082	7,082	7,082	7,082	7,082	7,082	7,082	7,082	7,082	7,082	7,082
Inside City Block 3	above 2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Lawn		10,118.00	13,389.00	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86	12,586.86
Total Inside City All Classes															
Inside City Block 1	0-35	1,651,899	1,854,782	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119	1,743,119
Inside City Block 2	36-2000	882,094	1,017,687	956,438	956,438	956,438	956,438	956,438	956,438	956,438	956,438	956,438	956,438	956,438	956,438
Inside City Block 3	above 2000	370,009	577,450	542,000	542,000	542,000	542,000	542,000	542,000	542,000	542,000	542,000	542,000	542,000	542,000
Grand Total Inside City Water Consumption		2,915,872	3,449,919	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360	3,242,360
			18%	-6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

TABLE 7: FORECAST OUTSIDE CITY WATER CONSUMPTION

Customer Class	Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY2016	Forecast FY 2017	Forecast FY2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Outside City Residential														
Outside City Block 1 0-35	5,952	7880	7,229	7,229	7,229	7,229	7,229	7,229	7,229	7,229	7,229	7,229	7,229	7,229
Outside City Block 2 36-2000	168	940	884	884	884	884	884	884	884	884	884	884	884	884
Outside City Block 3 above 2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Residential	6,120	8630	8,112	8,112	8,112	8,112	8,112	8,112	8,112	8,112	8,112	8,112	8,112	8,112
Outside City Commercial/Industrial														
Outside City Block 1 0-35	3,262	3909	3,298	3,298	3,298	3,298	3,298	3,298	3,298	3,298	3,298	3,298	3,298	3,298
Outside City Block 2 36-2000	2,888	10,220	9,607	9,607	9,607	9,607	9,607	9,607	9,607	9,607	9,607	9,607	9,607	9,607
Outside City Block 3 above 2000	36,388	14,214	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361
Total Outside City Commercial/Industrial	42,538	27,943	26,266	26,266	26,266	26,266	26,266	26,266	26,266	26,266	26,266	26,266	26,266	26,266
Outside City Lawn														
Outside City Block 1 0-35	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Outside City Block 2 36-2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Outside City Block 3 above 2000														
Total Outside City Lawn	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City All Classes														
Outside City Block 1 0-35	9,174	11,199	10,527	10,527	10,527	10,527	10,527	10,527	10,527	10,527	10,527	10,527	10,527	10,527
Outside City Block 2 36-2000	3,056	11,160	10,490	10,490	10,490	10,490	10,490	10,490	10,490	10,490	10,490	10,490	10,490	10,490
Outside City Block 3 above 2000	36,388	14,214	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361	13,361
Grand Total Inside City Water Consumption	48,618	36,573	34,379	34,379	34,379	34,379	34,379	34,379	34,379	34,379	34,379	34,379	34,379	34,379
TOTAL RETAIL														
Total Block 1	1,633,013	1,865,681	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646	1,753,646
Total Block 2	886,080	1,028,647	966,028	966,028	966,028	966,028	966,028	966,028	966,028	966,028	966,028	966,028	966,028	966,028
Total Block 3	445,277	591,664	556,164	556,164	556,164	556,164	556,164	556,164	556,164	556,164	556,164	556,164	556,164	556,164
Grand Total Retail Consumption	2,964,370	3,486,842	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738
		18%	-6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
WHOLESALE														
Genesee County Wholesale Rate														
Genesee County Consumption	6,121,530	6,214,790	4,661,055	-	-	-	-	-	-	-	-	-	-	-
GRAND TOTAL WATER CONSUMPTION	9,086,900	9,700,632	7,937,793	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738	3,276,738
		7%	-18%	-59%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Forecast Water Revenue at Existing Rates

Water utility revenue at existing rates is the sum of the volumetric and fixed charge revenue. Fixed charge revenue at existing rates was determined by multiplying the number of forecast accounts at each meter size, by the existing rate for that size and again by 12, for each of the monthly bills. Volumetric revenue was determined by multiplying the level of consumption in each consumption block, by the existing rate for that block. Table 8 on the following page summarizes the level of water revenue at existing water rates.

The total level of water revenue at existing rates in FY 2014 is forecast to be approximately $43 Million. Of this, around 70% is derived from the volumetric rates and 30% is associated with the fixed monthly service charges. In FY 2015, the level of revenue at existing rates is forecast to decline to approximately $32 Million. This change can be attributed to the loss of Flint's existing wholesale customer Genesee County, which will occur as a result of the City's discontinuing DWSD water service. On a going forward basis, the level of revenues at existing water rates would remain at 32 Million assuming consumption and account growth remain flat and the City makes no adjustments to water rates.

TABLE 8: FORECAST WATER REVENUE AT FY 2014 RATES

SUMMARY OF FORECAST WATER VOLUME REVENUE AT EXISTING RATES												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
GRAND TOTAL SYSTEM CONSUMPTION REVENUE	$ 29,661,666	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630	$ 29,587,630
GRAND TOTAL SYSTEM FIXED CHARGE REVENUE	$ 10,332,708	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942
GRAND TOTAL WATER REVENUE AT EXISTING RATES	$ 42,994,374	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575

SUMMARY OF METERED WATER REVENUE												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
TOTAL RETAIL CONSUMPTION REVENUE												
Total Inside City Residential	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886	$ 13,141,886
Total Inside City Commercial/Industrial	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630	$ 10,352,630
Total Inside City Farm	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146	$ 93,146
	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630
WHOLESALE CONSUMPTION REVENUE												
Genesee County Consumption	$ 6,074,036	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GRAND TOTAL SYSTEM CONSUMPTION REVENUE	$ 29,661,666	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630	$ 23,587,630

SUMMARY OF FIXED CHARGE WATER REVENUE												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
TOTAL RETAIL FIXED CHARGE REVENUE												
Total Inside City Residential	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537	$ 6,745,537
Total Inside City Commercial/Industrial	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286	$ 2,303,286
Total Inside City Farm	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119	$ 36,119
	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942
WHOLESALE FIXED CHARGE REVENUE												
Total Genesee County fixed Charge	$ 1,147,767	$	$	$	$	$	$	$	$	$	$	$
GRAND TOTAL SYSTEM FIXED CHARGE REVENUE	$ 10,322,708	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942	$ 9,174,942

3.2.2 Forecast of Water Operation and Maintenance Expenditures

Water O&M Inflation Rates

The budgets provided by the City are the basis for the forecast of water utility O&M expenditures. Given that the transition from DWSD to KWA involves significant shifts in budgetary expenditures on a relatively detailed level, the City provided uninflated estimates of budgeted O&M expenditures for FY 2014 through FY 2017. To forecast the level of water utility O&M expenditures that the City would incur over the forecast period we applied the escalation rates shown in Table 9 below.

TABLE 9: WATER O&M ESCALATION RATES

Category	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Wages & Salaries	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Benefits	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Pension	0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Medical	0%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Materials/Supplies	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
General	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Vehicle	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Pilot	0%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Depric:Depic Equip Replace	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cost Alloc Plan-Expense	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Utilities	0%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Maintenance	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Capita Outlay	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Water Supply Costs	0%	0%	0%	0%	5%	5%	5%	5%	5%	5%	5%	5%
KWA Bond Payment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
KWA Initiation Fee	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Purchase of KWA raw water	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Transfer to 101	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Transfer to 493	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

The rates shown above were developed based on discussions with City staff, and our experience with similar utilities.

Forecast Water Utility Operation and Maintenance Expenditures

Tables 10 and 11 on the following page indicate the estimated level of water utility O&M expenditures over the forecast period, both by the escalation rate categories and by department.
In FY 2014, the largest O&M expenditures related to the "Water Plant-Operations" department within which the bulk water purchases from DWSD were included. Note that this amount decreases significantly in FY 2015 and going forward as the City transitions from DWSD to KWA. Excluding purchased water, the most notable expenditures are associated with personnel: Wages and Salaries, Benefits, Pension, and the City's share of retiree healthcare benefits ("Cost Alloc. Plan-Expense"). In general, water O&M expenditures are projected to decrease from around $36 Million currently to $21 Million in FY 2015 with inflationary increases thereafter.

TABLE 10: WATER O&M BY CATEGORY

O&M SUMMARY (BY EXPENDITURE CATEGORY)

Category	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY2020	Forecast FY 202	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Wages & Salaries	$ 3,228,467	$ 3,672,226	$ 3,732,409	$ 3,996,875	$ -,012,751	$ 4,,03,134	$ 4,297,,28	$ 4,,348 42	$ 4,516,387	$ -,661,878	$ 4,791,405	$ 4,955,,78
Benefits	$ 1,,87,924	$ 1,223,652	$ 1,250,259	$ 1,298,077	$ -,397,019	$ 1,397,110	$ 1,418,-43	$ 1,,60997	$ 1,504,827	$,,89,97	$ 1,,95,,41	$ 1,644,065
Pension	$ 1,809,008	$ 1,809,252	$ 1,,87 915	$ 2,,87,,11	$ 2,191,,7E	$ 2,201,260	$ 2,416,,23	$ 2,,97 130	$ 2,568,,06	$ 2,,97,,05	$ 2,,37,,66	$ 3,,63,900
Medical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Materials/Supplies	$ 1,615,800	$ 2,503,724	$ 2,,78 896	$ 2,,28,,89	$ 2,,98,,94	$ 2,,7C,181	$ 2,54 ,,87	$ 2,,60615	$ 2,,00,,94	$ 2,,80,21	$ 2,,63,,67	$ 2,,40,,26
General	$ 3,,11,,32	$ 3,,43,,20	$ 3,,56,,88	$ 3,,62,,86	$ 3,,62,,7E	$ 3,,75,,53	$ 3,,91,,17	$ 4,,11 148	$ 4,,34,,82	$ -,,61,,85	$ 4,,,,7-2	$ 4,,27,,-94
Vehicle	$ 650,,36	$ 692,,26	$ 732,,72	$ 723,,53	$ 715,,6E	$,,67,,82	$ 7,,,,64	$ 814,,00	$ 330,,08	$ 864,,08	$ 80,,,24	$ 916,,28
Rent	$ 140,,50	$ 754,,63	$ 770,,52	$ 786,,53	$ 801,,62	$ 817,,86	$ 833,,20	$ 850,,00	$ 367,,04	$ 884,,48	$ 902,,20	$ 920,,83
Depreciable Equip Replace	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cost Alloc Plan Expense	$ 4,040,800	$ 4,,61,,18	$ 4,,26,,73	$ 4,,15,,73	$ -,,7,,31	$ 4,,84,,63	$ 4,,64,,88	$ 4,,50428	$ 5,,18,,11	$ 5,,72,,06	$ 5,,30,,20	$ 5,,53,,36
Utilities	$ 910,,00	$ 1,,55,,20	$ 1,,37 ,,08	$ 1,,47,,08	$ -,,36,,6E	$ 1,,87,,32	$ 1,,61,,41	$ 1,,,7201	$ 1,,86,,03	$ -,,67,,22	$ 1,,31,,7-9	$ 2,,38,,88
Maintenance	$ -,,7,,00	$ 42,,00	$ 43,,09	$ 44,,08	$ 46,,,E	$ 47,,02	$ 48,,61	$ 50428	$ 51,,76	$ 53,,05	$ 55,,06	$ 57,,36
Capital Outlay	$ 60,,00	$ 30,,00	$ 31,,2"	$ 32,,82	$ 33,,6E	$ 34,,78	$ 35,,22	$ 36,,06	$ 38,,09	$ 39,,40	$ 40,,,7	$ 41,,27
Water Supply Costs	$ 18,000,,00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BOR Bond Payment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BOR Filtration Fee	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase of CVP water	$ -	$ -	$ -	$ 1,,1,,00	$ -,,1,,00	$ 1,,1,,00	$ 1,,1,,00	$ 1,,1,,00	$ 1,,1,,00	$ -,,1,,00	$ 1,,1,,00	$ 1,,1,,00
Transfer to 101	$ 1,,30,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00	$ -,,00,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00	$ 1,,10,,00	$ -,,00,,00	$ 1,,10,,00	$ 1,,00,,00
Transfer to 490	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ 30,005,200	$ 21,400,441	$ 22,140,012	$ 20,316,057	$ 20,988,204	$ 24,705,140	$ 25,434,000	$ 25,,007 15	$ 26,300,,00	$ 27,,74,140	$ 30,007,,24	$ 25,,49,,00

TABLE 11: WATER O&M BY DEPARTMENT

O&M DETAIL FOR FISCAL YEAR ENDED JUNE 30

DEPARTMENT	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY2019	Forecast FY2020	Forecast FY2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Dept 535.100-Utilities - Water Administration	$ 7,492,304	$ 7,718,511	$ 7,946,452	$ 8,179,,97	$ 3,419,365	$ 8,667,940	$ 8,922,374	$ 9,186,486	$ 5,457,512	$ 9,706,685	$ 10,024,266	$ 0,323,546
Total Dept 535.205-Utilities - Water Cross Connection Prog	$ 104,,59	$ 108,204	$ 112,,07	$ 116,015	$ 120,142	$ 24,426	$ 128,872	$ 133,488	$ 138,279	$ 143,254	$ 148,419	$ 153,782
Total Dept 540.100-Water Service Center Management	$ 1,223,240	$ 1,214,890	$ 1,261,276	$ 1,324,940	$ 1,366,926	$ 1,,10,276	$,,455,037	$ 1,,01,267	$ 1,548,985	$ 1,,98,279	$ 1,549,,72	$ 1,,01,738
Total Dept 540.200-WSC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 540.210-Miscellaneous Heating - Water	$ 730,,67	$ 630,,81	$ 661,,28	$ 70,,42	$ 691,,60	$ 610,,79	$ 631,,67	$ 663,,03	$ 6,,6,,7	$ 700,,81	$ 724,,59	$ 65,,16
Total Dept 540.300-Misc Water Distribution Mains	$ 3,,91,,77	$ 3,,88,,36	$ 3,,04,,47	$ 3,,65,,07	$ 4,,01,,8"	$ 4,,31,,81	$ -,,07,,86	$ 4,,97,,14	$ 4,,81,,18	$ 4,,45,,74	$ 5,,11,,23	$ 5,,87,,78
Total Dept 545.200-Water Plant - Operations	$ 21,,5,,88	$ 5,,20,,88	$ 5,,03,,01	$ 6,,00,,05	$ 5,,82,,80	$ 6,,70,,39	$ 6,,8,,22	$ 7,,88,,21	$ 7,,77,,75	$ 7,,95,,25	$ 7,,20,,02	$ 7,,53,,20
Total Dept 545.201-Water Plant Maintenance	$ 1,,88,,81	$ 1,,29,,51	$ 1,,64,,38	$ 1,,40,,51	$ 1,,79,,36	$ 1,,80,,43	$,,22,,75	$ 1,,97,,97	$ 2,,55,,13	$ 2,,25,,51	$ 2,,97,,62	$ 2,,72,,29
Total Dept 545.202-Water Plant - Dam Operations	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 545.203-Water Plant - Dam Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 545.300-Water Plant - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 965.101-Transfers out to Fund 101	$ 1,,30,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00	$ -,,10,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00	$ 1,,10,,00	$ 1,,00,,00
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GRAND TOTAL WATER UTILITY	$ 36,,85,,26	$ 21,,83,,41	$ 22,,40,,12	$ 23,,16,,57	$ 23,,00,,0-	$ 24,,05,,48	$ 25,,34,,03	$ 26,,88,,15	$ 26,,08,,30	$ 27,,74,,48	$ 28,,07,,24	$ 29,,63,,68

3.2.3 Water Utility CIP and CIP Financing

Tables 12 and 13 on the following two pages indicate the water capital improvements program ("CIP") provided by the City and the CIP financing plan.

As the plan we received from the City was presented in current year dollars, we escalated the project amounts 3% per year from FY 2015 onward. The largest capital improvements in dollar terms are associated with the rehabilitation of the City's water treatment plant (i.e. Water Plant-Phase II projects). These projects are in large part associated with transitioning the City's water treatment plant from back-up status to the primary source of treated water for the City. As discussed above, the improvements to the water treatment plant will allow the City to treat raw water purchased from the KWA for distribution to City customers. In general, the level of spending in the CIP decreases from $10 Million to $7.5 Million as the plant improvements are completed and increases again in the out years due to planned annual recapitalization.

There are three items of note in Table 13. First, all projects are projected to be cash financed at this time. The City may seek to leverage its revenue stream in the future via use of the State of Michigan's ("State") Drinking Water Revolving Revenue Fund ("DWRRF") loan program. This would be particularly beneficial for major water capital improvements, as it would spread the financing responsibility over existing and future ratepayers who receive the benefit of the improvement throughout the asset's useful life. Second, note that the proceeds from the recently completed sale of the Flint pipeline to Genesee County have been included to offset the costs of the treatment plant improvements. Finally, note that the "uses" category includes a line for additional uses, which represent the KWA initiation payments required of the City until it begins paying its share of KWA debt service in FY 2017.

TABLE 12: WATER CAPITAL IMPROVEMENTS PROGRAM

WATER CAPITAL PROJECTS (ESCALATED)		Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Project:													
2000' of Transmission Main Annually	WSIC Water Fund	$ -	$ 2,160,000	$ 2,052,220	$ 2,041,060	$ 2,966,303	$ 3,014,110	$ 3,104,500	$ 3,197,072	$ 3,292,002	$ 3,382,410	$ 3,494,100	$ 3,589,000
Water Meter Replacement	WSIC Water Fund	$ 500,000	$ 1,287,500	$ 1,326,125	$ 54,636	$ 56,275	$ 57,964	$ 59,703	$ 61,494	$ 63,339	$ 65,239	$ 67,196	$ 69,212
Data Collection and CIS Implementation	WSIC Water Fund	$ -	$ 515,000	$ 530,450	$ 546,364	$ 112,561	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Vehicles, Dump Truck, Flatbeds, Step Van, Tractor	WSIC Water Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Valve Exercising	WSIC Water Fund	$ 60,000	$ 61,800	$ 63,654	$ 65,564	$ 67,531	$ 69,565	$ 71,643	$ 73,792	$ 76,006	$ 78,286	$ 80,635	$ 83,054
Water Plant-Phase II, Segment I Rehabilitation	Water Plant	$ 7,200,000	$ 1,030,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Plant-Phase II, Segment II Lime Residual Disposal	Water Plant	$ 795,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Toney Rd. Booster Station Upgrades	Water Plant	$ 120,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Center St. Electrical Upgrades	Water Plant	$ 600,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Westside Roof Replacement	Water Plant	$	$	$	$	$	$	$	$	$	$	$	
24" Water Line Loop	Water Plant	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
SCADA Upgrades	Water Plant	$ 400,000	$ 412,000	$ 424,360	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Plant 2 to Dort Reservoir Lift Pump Station	Water Plant	$ -	$ 2,060,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Residual Treatment Solids Handling	Water Plant	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Plant 2 Lab and Ops Center Roof Replacement	Water Plant	$ -	$ 257,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Electrical Upgrades	Water Plant	$ -	$ 317,598	$ 368,906	$ 400,694	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Raw Water Line to PS 4	Water Plant	$	$	$ 636,540	$	$	$	$	$	$	$	$	
Alum Feed System	Water Plant	$ -	$ -	$ 38,253	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Post Filtration System	Water Plant	$ -	$ -	$ 367,229	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Hamilton Dam Sheet Piling	Water Plant	$ -	$ -	$ 1,060,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Yard Valve Replacement 4	Water Plant	$ -	$ -	$ -	$ 218,545	$ 225,102	$ 231,855	$ 238,810	$ 245,975	$ 253,354	$ 260,955	$ 268,783	$ 276,847
Phosphoric Acid Feed System	Water Plant	$	$	$	$ 185,764	$	$	$	$	$	$	$	
Elevated Tank Altitude Valve Rebuilt	Water Plant	$ -	$ -	$ -	$ 54,636	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Fencing Around Water Plant	Water Plant	$ -	$ -	$ -	$ 109,273	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Security Cameras	Water Plant	$ -	$ -	$ -	$ 10,927	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Thread Lake Dam Replacement	Water Plant	$ -	$ -	$ -	$ 666,635	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Various Control Station Roof Replacements	Water Plant	$ -	$ -	$ -	$ -	$ 562,754	$ 579,637	$ 597,026	$ 614,937	$ 633,385	$ 652,387	$ 671,958	$ 692,117
Replace Pump 1@ PS#3 with VFD	Water Plant	$ -	$ -	$ -	$ -	$ 45,001	$ 46,371	$ 47,762	$ 49,196	$ 51,671	$ 52,191	$ 53,757	$ 55,369
Replace Pumps 1&2 @ PS#4 with VFD's	Water Plant	$	$	$	$	$ 168,826	$ 173,891	$ 179,108	$ 184,481	$ 190,016	$ 195,716	$ 201,587	$ 207,635
Holloway Drum Gate Rehab	Water Plant	$ -	$ -	$ -	$ -	$ 1,125,509	$ 1,159,274	$ 1,194,052	$ 1,229,874	$ 1,266,770	$ 1,304,773	$ 1,343,916	$ 1,384,234
Ongoing System Re-Capitalization	WSIC Water Fund	$ -	$ -	$ 530,450	$ 1,092,727	$ 1,125,509	$ 1,159,274	$ 1,194,052	$ 1,841,811	$ 1,900,166	$ 1,957,180	$ 2,016,895	$ 2,076,351
		$ 9,675,000	$ 8,267,398	$ 8,040,197	$ 6,285,795	$ 6,415,400	$ 6,401,005	$ 7,289,710	$ 7,502,231	$ 7,727,207	$ 7,960,116	$ 8,197,800	$ 8,443,827

TABLE 13: WATER CIP FINANCING PLAN

Water Construction Fund/Account		Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Beginning CIP Fund Balance													
Beginning Year Construction Fund Balance		$ -	$ 144,700	$ 289,302	$ 188,165	$ 439,409	$ 18,009	$ 26,074	$ 242,355	$ 240,125	$ 12,827	$ 53,711	$ 365,821
Carry-Over CIP from Previous Year		$ -											
Net Funds Available for Current CIP		$ -	$ 144,700	$ 289,302	$ 188,165	$ 439,409	$ 18,009	$ 26,074	$ 242,355	$ 240,125	$ 12,827	$ 53,711	$ 365,821
Sources of CIP Financing													
Water Revenue Bonds Issued		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Commercial Paper Program		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Rate Revenue Financing (Cash)		$ 7,000,000	$ 9,000,000	$ 8,500,000	$ 6,900,000	$ 6,000,000	$ 6,500,000	$ 7,500,000	$ 7,500,000	$ 7,500,000	$ 8,000,000	$ 8,500,000	$ 8,500,000
SDC Receipts Used for CIP Financing				-									
Proceeds from Sale of Flint Waterline		$ 3,987,700											
		$ 10,987,700	$ 9,144,700	$ 8,789,302	$ 6,988,165	$ 6,439,409	$ 6,518,009	$ 7,526,074	$ 7,742,355	$ 7,740,125	$ 8,012,827	$ 8,553,711	$ 8,865,821
Uses of CIP Funds													
Total WSC Water Fund		$ 650,000	$ 4,027,300	$ 5,112,929	$ 4,600,381	$ 4,288,189	$ 4,300,907	$ 5,026,960	$ 5,177,769	$ 5,339,102	$ 5,499,095	$ 5,697,888	$ 5,827,625
Total Water Plant		$ 9,115,000	$ 4,240,098	$ 2,997,208	$ 1,636,375	$ 2,127,212	$ 2,191,028	$ 2,295,759	$ 2,324,462	$ 2,394,195	$ 2,486,021	$ 2,540,002	$ 2,616,202
Additional Uses		$ 1,168,000	$ 584,000	$ 584,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Current Year CIP		$ 10,843,000	$ 8,851,398	$ 8,624,137	$ 6,236,756	$ 6,415,400	$ 6,491,935	$ 7,289,719	$ 7,502,231	$ 7,727,297	$ 7,985,116	$ 8,197,890	$ 8,443,827
Bond Issuance Costs		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Refunding of Commercial Paper		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
EQUALS: Ending CIP Fund Balance		$ 144,700	$289,302	$188,165	$439,409	$ 18,009	$26,074	$242,355	$240,125	$ 12,827	$53,711	$365,821	$ 411,994
Target Balance (% of Next Years CIP)	25.00%	$ 2,212,850	$ 2,155,094	$ 1,588,999	$ 1,609,850	$ 1,622,984	$ 1,830,990	$ 1,875,568	$ 1,931,824	$ 1,988,779	$ 2,049,472	$ 2,110,957	$ -
Variance from Target		($2,068,150)	($1,862,732)	($1,399,774)	($1,170,441)	($1,604,575)	($1,794,859)	($1,639,202)	($1,691,700)	($1,976,952)	($1,995,762)	($1,755,136)	$ 411,994

3.2.4 Water Cash Flow Forecast

The final step in the development of the water utility financial plan involves the preparation of a comprehensive cash flow forecast. A summary of the water cash flow forecast is presented in Table 14 on the following page. The key components of the forecast are Financial Plan Inputs, Revenues, Expenditures, and Operating Performance.

- The Financial Plan Inputs component indicates the forecast rate revenue increases. These increases were determined in consultation with City staff and are designed to:
- Ensure recovery of O&M expenditures and existing water utility debt service
- Provide cash financing for the capital projects outlined in the CIP including those necessary to transition from DWSD to the KWA
- Minimize the risk associated with operating a climate dependent enterprise via the build-up of operating reserves equivalent to 90 days of O&M and Debt Service

The Revenues component indicates the revenue at existing rates discussed previously, non-rate revenue and the additional revenue generated by the rate revenue increases shown in the inputs section. Given the forecast of water demand, O&M and capital expenditures and the 90 Day operating reserve benchmark, the "additional revenue" line represents the amount of revenue needed—above existing rate revenues –-to ensure adequate recovery of the water utility's revenue requirement in each year of the forecast.

The Expenditures component indicates the major sources of expenditures for the City's water utility: O&M expenditures, Capital expenditures (Rate Revenue Financing and Debt Service) and Transfers to the Operating Reserve.

The Operating performance component indicates the year end position of the water utility with respect to a few key factors. Included are the estimated operating reserve balance, the target reserve balance (90 Days of O&M and Debt Service), the construction fund ending balance and the water utility's debt service coverage ratio.

TABLE 14: WATER CASH FLOW FORECAST

Water Utility	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
FINANCIAL PLAN INPUTS												
Cumulative %Increase		5.0%	10.3%	15.2%	18.7%	22.2%	25.3%	27.8%	30.3%	33.0%	35.6%	38.3%
Annual % Increase in Rate Revenues	0.0%	5.0%	5.0%	4.5%	3.0%	3.0%	2.5%	2.0%	2.0%	2.0%	2.0%	2.0%
REVENUES												
Grand Total Water Revenue at Existing Rates	$ 42,914,374	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575	$ 32,762,575
Additional Revenue from Rate Increases	$ -	$ 1,638,100	$ 3,368,100	$ 4,983,900	$ 6,115,900	$ 7,222,300	$ 8,283,400	$ 9,104,300	$ 9,941,600	$ 10,795,700	$ 11,666,900	$ 12,555,900
Total Non-Rate Revenues	$ 886,000	$ 913,314	$ 931,644	$ 927,886	$ 928,500	$ 929,131	$ 931,745	$ 930,725	$ 933,187	$ 936,360	$ 935,527	$ 942,481
Add Transfers in from General Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Rate and Non-Rate Revenues	*$ 43,800,374*	*$ 35,313,989*	*$ 37,062,318*	*$ 38,673,761*	*$ 39,806,975*	*$ 40,914,006*	*$ 41,977,720*	*$ 42,797,601*	*$ 43,637,362*	*$ 44,494,635*	*$ 45,365,002*	*$ 46,260,556*
EXPENDITURES												
Total O&M Expenditures	*$ 36,865,205*	*$ 21,483,441*	*$ 22,140,012*	*$ 23,316,857*	*$ 23,999,504*	*$ 24,705,148*	*$ 25,434,603*	*$ 26,188,716*	*$ 26,968,360*	*$ 27,774,448*	*$ 28,607,924*	*$ 29,469,768*
Grand Total Existing and Proposed Debt Service	$ 2,747,946	$ 2,742,821	$ 2,746,423	$ 9,648,446	$ 9,644,008	$ 9,643,195	$ 9,639,827	$ 9,192,721	$ 8,676,674	$ 8,085,623	$ 8,423,746	$ 6,900,000
Water Rate Revenue Financing (Cash)	$ 7,000,000	$ 9,000,000	$ 8,500,000	$ 6,500,000	$ 6,000,000	$ 6,500,000	$ 7,500,000	$ 7,500,000	$ 7,500,000	$ 8,000,000	$ 8,500,000	$ 8,100,000
Water Transfer to Equipment Replacement Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Expenditures	*$ 9,747,946*	*$ 11,742,821*	*$ 11,246,423*	*$ 16,148,446*	*$ 15,644,008*	*$ 16,143,195*	*$ 17,139,827*	*$ 16,692,721*	*$ 16,176,674*	*$ 16,085,623*	*$ 16,923,746*	*$ 15,000,000*
Add /Less: Surplus/(Deficit)	*$ (2,752,778)*	*$ 2,087,728*	*$ 3,865,883*	*$ (791,543)*	*$ 163,465*	*$ 125,662*	*$ (597,311)*	*$ (83,836)*	*$ 492,328*	*$ 634,563*	*$ (166,668)*	*$ 1,390,788*
GROSS REVENUE REQUIREMENTS												
O&M	$ 36,865,205	$ 21,483,441	$ 22,140,012	$ 23,316,857	$ 23,999,504	$ 24,705,148	$ 25,434,603	$ 26,188,716	$ 26,968,360	$ 27,774,448	$ 28,607,924	$ 29,469,768
Capital	$ 9,747,946	$ 11,742,821	$ 11,246,423	$ 16,148,446	$ 15,644,008	$ 16,143,195	$ 17,139,827	$ 16,692,721	$ 16,176,674	$ 16,085,623	$ 16,923,746	$ 15,000,000
Operating Surplus/Deficit	$ (2,752,778)	$ 2,087,728	$ 3,865,883	$ (791,543)	$ 163,465	$ 125,662	$ (597,311)	$ (83,836)	$ 492,328	$ 634,563	$ (166,668)	$ 1,390,788
Total Gross Revenue Requirements	*$ 43,860,374*	*$ 35,313,989*	*$ 37,052,318*	*$ 38,673,761*	*$ 39,806,975*	*$ 40,974,006*	*$ 41,977,120*	*$ 42,797,601*	*$ 43,637,362*	*$ 44,494,635*	*$ 45,365,002*	*$ 46,260,556*
OPERATING PERFORMANCE												
Ending Operating Reserve Balance	$ 3,375,055	$ 5,462,823	$ 9,328,706	$ 8,537,164	$ 8,700,629	$ 9,826,291	$ 9,228,981	$ 8,945,145	$ 9,437,474	$ 10,072,037	$ 9,905,369	$ 11,296,155
Target Operating Reserve Balance	$ 9,903,283	$ 6,066,586	$ 6,221,609	$ 8,241,326	$ 8,410,878	$ 8,557,086	$ 8,768,608	$ 8,845,395	$ 8,911,288	$ 8,966,018	$ 9,257,918	$ 9,682,442
Variance From Target	$ (6,528,192)	$ (603,742)	$ 2,907,097	$ 95,838	$ 89,751	$ 1,269,205	$ 460,373	$ 99,787	$ 526,215	$ 1,107,019	$ 647,451	$ 2,303,714
Construction Fund Ending Balance	*$ 144,710*	*$ 293,302*	*$ 169,165*	*$ 433,409*	*$ 19,009*	*$ 26,074*	*$ 262,355*	*$ 240,725*	*$ 128,87*	*$ 53,711*	*$ 356,821*	*$ 417,994*
Stand Alone DSCR	2.5	5.04	5.43	1.59	1.64	1.69	1.72	1.81	1.92	2.07	1.99	2.43

3.3 WASTEWATER UTILITY FINANCIAL PLAN

3.3.1 Forecast Wastewater Units of Service and Revenues at Existing Rates

Wastewater Utility Rates

The City recovers the cost of operating the wastewater utility via volumetric rates (i.e. rates based on the amount of wastewater discharged) and fixed monthly service charges (a charge per customer bill). The City's existing wastewater volumetric charge is a uniform rate, or a rate that does not vary (on a per unit basis) as the amount of wastewater discharged varies. The existing wastewater volumetric rate structure is indicated in Table 15 below. Similar to the water utility volumetric rate structure a distinction is made between inside and outside city customers, with the outside city rate set at approximately 110% of the inside city rate.

TABLE 15: EXISTING WASTEWATER VOLUMETRIC RATES

CUSTOMER CLASS		Test-Year FY 2014 Existing Rates
Total Inside City All Classes	($/CCF)	$ 4.80
Total Outside City All Classes	($/CCF)	$ 5.29

The existing wastewater rate structure includes a fixed service charge which varies by customer water meter size. The rates are shown in Table 16 on the following page. Most Flint residential customers have a 5/8" meter and currently pay the $32.00 fixed monthly service charge. Similar to the wastewater volumetric rate, the wastewater fixed charges include an inside outside city differential (120%).

In addition to the retail wastewater rates, the City currently serves a wholesale wastewater customer, Beecher Metropolitan District ("District"). The District currently pays $1.34 per CCF of wastewater discharged, an amount that was negotiated in the 1995 Contract between the City and the District.

TABLE 16: EXISTING WASTEWATER FIXED CHARGES

CUSTOMER CLASS	Test-Year FY 2014 Existing Rates
Inside City Residential Customers	
5/8"	$ 32.00
3/4"	$ 46.92
1"	$ 65.34
1-1/2"	$ 65.34
2"	$ 65.34
Inside City Commercial/Industrial Customers	
5/8"	$ 51.92
3/4"	$ 64.43
1"	$ 84.71
1-1/2"	$ 137.84
2"	$ 196.16
3"	$ 438.06
4"	$ 721.84
6"	$ 1,459.95
8"	$ 2,148.21
10'	$ 2,918.39
12'	$ 3,426.23
16'	$ 4,523.95
20'	$ 5,326.87
Outside City Residential Customers	
5/8"	$ 41.01
3/4"	$ 56.01
1"	$ 76.99
1-1/2"	$ 76.99
2"	$ 76.99
Outside City Commercial/Industrial Customers	
5/8"	$ 58.12
3/4"	$ 73.62
1"	$ 98.05
1-1/2"	$ 164.80
2"	$ 232.43
3"	$ 522.87
4"	$ 906.01
6"	$ 1,770.13
8"	$ 2,646.52
10'	$ 3,522.54
12'	$ 4,132.57
16'	$ 5,497.91
20'	$ 6,532.02

Forecast Wastewater Units of Service

In order to forecast the level of revenue expected under existing wastewater fixed and volumetric rates, the number of wastewater accounts and the level of wastewater usage must be estimated for

the forecast period. The number of historical and forecast wastewater utility accounts is indicated in Tables 17 and 18 on the following two pages.

Note that the raw billing data appear to indicate a 14% increase in inside city accounts and an 18% increase in outside city accounts from FY 2012 to FY 2013. This increase in accounts does not appear to have been sustained into FY 2014. The City has indicated that wastewater billings have decreased approximately 12% from FY 2013. Given this change we have adjusted the forecast level of wastewater accounts to be around 13% less than their FY 2013 level. As no significant growth the City's customer base is expected, no customer growth has been forecast on a going forward basis.

TABLE 17: FORECAST INSIDE CITY WASTEWATER ACCOUNTS

Customer Class	Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Inside City Residential														
"0			-	-	-	-	-	-	-	-	-	-	-	-
"00			-	-	-	-	-	-	-	-	-	-	-	-
5/8"	24,975	28,480	24,780	24,780	24,780	24,780	24,780	24,780	24,780	24,780	24,780	24,780	24,780	24,780
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	271	337	293	293	293	293	293	293	293	293	293	293	293	293
1-1/2"	26	30	29	29	29	29	29	29	29	29	29	29	29	29
2"	9	11	9	9	9	9	9	9	9	9	9	9	9	9
Unmetered			-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Residential Remote	25,282	28,841	25,091	25,091	25,091	25,091	25,091	25,091	25,091	25,091	25,091	25,091	25,091	25,091
Inside City Commercial/Industrial														
"0			-	-	-	-	-	-	-	-	-	-	-	-
"00			-	-	-	-	-	-	-	-	-	-	-	-
5/8"	314	402	360	360	360	360	360	360	360	360	360	360	360	360
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	240	273	238	238	238	238	238	238	238	238	238	238	238	238
1-1/2"	236	263	229	229	229	229	229	229	229	229	229	229	229	229
2"	237	271	236	236	236	236	236	236	236	236	236	236	236	236
3"	78	89	77	77	77	77	77	77	77	77	77	77	77	77
4"	56	61	53	53	53	53	53	53	53	53	53	53	53	53
6"	36	41	36	36	36	36	36	36	36	36	36	36	36	36
8"	3	3	3	3	3	3	3	3	3	3	3	3	3	3
10"			-	-	-	-	-	-	-	-	-	-	-	-
12"			-	-	-	-	-	-	-	-	-	-	-	-
16"			-	-	-	-	-	-	-	-	-	-	-	-
20"			-	-	-	-	-	-	-	-	-	-	-	-
Unmetered			-	-	-	-	-	-	-	-	-	-	-	-
Total Inside City Commercial/Industrial	1,261	1,409	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221	1,221
Total Inside City Accounts	26,543	30,244	26,312	26,312	26,312	26,312	26,312	26,312	26,312	26,312	26,312	26,312	26,312	26,312
		14%	-13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

TABLE 18: FORECAST OUTSIDE CITY WASTEWATER ACCOUNTS

Customer Class	Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Outside City Residential														
¾"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
¾"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
5/8"	6	7	6	6	6	6	6	6	6	6	6	6	6	6
3/4"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
1"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
1 1/2"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
2"	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Unmetered	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Residential Remote	6	7	6	6	6	6	6	6	6	6	6	6	6	6
Outside City Commercial/Industrial														
¾"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
¾"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/8"	5	5	4	4	4	4	4	4	4	4	4	4	4	4
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	2	3	3	3	3	3	3	3	3	3	3	3	3	3
1 1/2"	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2"	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unmetered	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Outside City Commercial/Industrial	11	13	11	11	11	11	11	11	11	11	11	11	11	11
Total Outside City Accounts	17	20	17	17	17	17	17	17	17	17	17	17	17	17
		18%	-15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

In addition to forecasting the number of accounts by meter size and customer class, the level of wastewater usage must also be estimated for the forecast period. The historical and forecast level of wastewater usage by customer class can be on Table 19 on the following page.

Note that—consistent with the significant increase in inside city water accounts in FY 2013—inside city wastewater usage has increased significantly in FY 2013 (18%). Given the uncertainty surrounding this most recent upswing in billed wastewater usage, and the subsequent decrease in billed wastewater revenues, retail usage has been forecast at 15% below FY 2013 levels for FY 2014, FY 2015 and the remainder of the ten year forecast period.

TABLE 19: FORECAST WASTEWATER USAGE

Customer Class	Historical FY 2012	Historical FY 2013	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
INSIDE CITY														
Inside City Metered Wastewater Rates														
Total Inside City Residential	1,339,611	1,764,901	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886	1,576,886
Total Inside City Commercial/Industrial	1,205,044	1,645,554	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721	1,308,721
Total Inside City All Classes	2,745,655	3,600,455	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387	2,975,387
		27%	-17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
OUTSIDE CITY														
Outside City Metered Wastewater Rates														
Total Outside City Residential	219	242	216	216	216	216	216	216	216	216	216	216	216	216
Total Outside City Commercial/Industrial	8,505	8,249	7,012	7,012	7,012	7,012	7,012	7,012	7,012	7,012	7,012	7,012	7,012	7,012
Total Outside City All Classes	8,724	8,491	7,217	7,217	7,217	7,217	7,217	7,217	7,217	7,217	7,217	7,217	7,217	7,217
		-3%	-15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TOTAL RETAIL														
Total Residential	1,339,830	1,765,143	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872	1,576,872
Total Commercial/Industrial	1,213,549	1,653,803	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733	1,315,733
	2,754,200	3,598,946	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604	2,892,604
		27%	-19%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
WHOLESALE														
Beecher Metro Wholesale Rate														
Beecher Metro Wholesale Rate	620,369	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673	613,673
GRAND TOTAL WASTEWATER USAGE	3,374,572	4,022,619	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277	3,406,277
		23%	-13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Forecast Wastewater Revenue at Existing Rates

Wastewater utility revenue at existing rates is the sum of wastewater volumetric and fixed charge revenue. Fixed charge revenue at existing rates was determined by multiplying the number of forecast accounts at each meter size, by the existing rate for that size and again by 12 for each of the monthly bills. Volumetric revenue was determined by multiplying the level of consumption by customer class, by the existing volumetric rates. Table 20 on the following page indicates the level of wastewater revenue at existing rates.

Total wastewater revenue at existing rates in FY 2014 is forecast to be approximately $27 Million. Of this, approximately 54% is derived from the volumetric rates and 46% is associated with the fixed monthly service charges. On a going forward basis, the level of revenues at existing wastewater rates would remain at $27 Million assuming consumption remains flat and the City makes no adjustments to wastewater rates.

TABLE 20: FORECAST WASTEWATER REVENUE AT FY 2014 RATES

SUMMARY OF FORECAST WASTEWATER RATE REVENUE AT EXISTING RATES												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
GRAND TOTAL SYSTEM USAGE REVENUE	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754
GRAND TOTAL SYSTEM FIXED CHARGE REVENUE	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621
GRAND TOTAL WASTEWATER REVENUE AT EXISTING RA	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374

SUMMARY OF METERED WASTEWATER REVENUE												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
TOTAL RETAIL USAGE REVENUE												
Total Inside City Residential	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083	$ 7,559,083
Total Inside City Commercial/Industrial	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917	$ 6,760,917
	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000	$ 14,320,000
WHOLESALE USAGE REVENUE												
Beecher Metro/Wholesale Rate	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753	$ 685,753
GRAND TOTAL SYSTEM USAGE REVENUE	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754	$ 15,005,754

SUMMARY OF FIXED CHARGE WASTEWATER REVENUE												
Customer Class	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
TOTAL RETAIL FIXED CHARGE REVENUE												
Total Inside City Residential	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131	$ 9,771,131
Total Inside City Commercial/Industrial	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974	$ 2,972,974
	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105	$ 12,744,105
WHOLESALE FIXED CHARGE REVENUE												
Beecher Metro Fixed Charge	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516	$ 27,516
GRAND TOTAL SYSTEM FIXED CHARGE REVENUE	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621	$ 12,771,621

3.3.2 Forecast Wastewater Utility Operation and Maintenance Expenditures

Wastewater O&M Inflation Rates

The budgets provided by the City are the basis for the forecast of wastewater utility O&M expenditures. To forecast the level of wastewater utility O&M expenditures that the City is projected to incur over the forecast period we applied escalation rates shown in Table 21 below.

TABLE 21: WASTEWATER O&M ESCALATION RATES

Category	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Wages & Salaries	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Benefits	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Pension	0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Medical	0%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Materials/Supplies	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
General	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Vehicle	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Pilot	0%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Depr/Depic Equip Replace	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cost Alloc Plan Expense	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Utilities	0%	-9%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Maintenance	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Capital Outlay	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Water Supply Costs	0%	0%	0%	0%	5%	5%	5%	5%	5%	5%	5%	5%
KWA 3rd Payment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
KWA Ariba on Fee	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Purchase of KWA raw water	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Transfer to 101	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Transfer to 493	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Forecast Wastewater Operation and Maintenance Expenditures

Tables 22 and 23 on the following page indicate level of wastewater O&M expenditures over the forecast period, by the escalation rate categories and by department.

Unlike the water utility there is no single large cost driver. The most notable expenditures are associated with personnel: Wages and Salaries, Benefits, Pension, and the City's share of retiree healthcare benefits ("Cost Alloc. Plan-Expense"). In general, wastewater O&M expenditures are projected to decrease from 24 Million in FY 2014 to 23 Million in FY 2015 with inflationary increases thereafter.

TABLE 22: WASTEWATER O&MBY CATEGORY

Category	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Wages & Salaries	$ 4,299,878	$ 4,301,275	$ 4,451,913	$ 4,594,440	$ 4,721,973	$ 4,850,659	$ 5,018,542	$ 5,189,628	$ 5,314,523	$ 5,474,961	$ 5,636,263	$ 5,817,439
Benefits	$ 1,584,803	$ 1,595,181	$ 1,643,036	$ 1,692,327	$ 1,743,097	$ 1,795,390	$ 1,849,252	$ 1,904,721	$ 1,961,871	$ 2,020,727	$ 2,081,349	$ 2,143,790
Pension	$ 2,047,927	$ 2,091,618	$ 2,156,199	$ 2,306,009	$ 2,421,309	$ 2,542,375	$ 2,669,494	$ 2,802,968	$ 2,943,117	$ 3,090,273	$ 3,244,786	$ 3,407,026
Medical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Materials&Supplies	$ 1,491,050	$ 1,535,782	$ 1,581,856	$ 1,629,311	$ 1,678,190	$ 1,728,535	$ 1,780,392	$ 1,833,803	$ 1,888,818	$ 1,945,482	$ 2,003,847	$ 2,063,962
General	$ 3,011,203	$ 1,752,239	$ 1,804,806	$ 1,858,951	$ 1,914,719	$ 1,972,161	$ 2,031,395	$ 2,092,266	$ 2,155,033	$ 2,219,684	$ 2,286,275	$ 2,354,863
Vehicle	$ 760,802	$ 783,627	$ 807,135	$ 831,340	$ 856,280	$ 881,970	$ 908,438	$ 935,691	$ 963,762	$ 992,675	$ 1,022,455	$ 1,053,129
Plant	$ 1,218,300	$ 1,242,666	$ 1,267,519	$ 1,292,870	$ 1,318,727	$ 1,345,102	$ 1,372,004	$ 1,399,444	$ 1,427,433	$ 1,455,981	$ 1,485,101	$ 1,514,803
Depriat/Depltic Equip Replace	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cost/Misc Plan Expense	$ 5,038,744	$ 5,189,906	$ 5,345,604	$ 5,505,972	$ 5,671,151	$ 5,841,285	$ 6,016,524	$ 6,197,020	$ 6,382,930	$ 6,574,418	$ 6,771,651	$ 6,974,800
Utilities	$ 2,289,000	$ 2,218,320	$ 1,960,941	$ 2,099,378	$ 2,120,954	$ 2,205,792	$ 2,294,023	$ 2,385,784	$ 2,481,216	$ 2,580,464	$ 2,683,683	$ 2,791,030
Maintenance	$ 401,000	$ 413,040	$ 425,057	$ 430,009	$ 432,004	$ 455,004	$ 479,201	$ 493,917	$ 500,705	$ 523,987	$ 539,717	$ 555,909
Capital Outlay	$ 45,000	$ 49,131	$ 50,606	$ 52,124	$ 53,687	$ 55,297	$ 56,956	$ 58,665	$ 60,425	$ 62,238	$ 64,105	$ 66,028
Water Supply Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
KIWA Bond Payment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
KIWA Initiation Fee	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase of KIWA raw water	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Interest	$	$	$	$	$	$	$	$	$	$	$	$
Principal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Transfer to 101	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000
Transfer to 499	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ 24,329,627	$ 23,053,302	$ 23,304,671	$ 24,011,980	$ 24,812,101	$ 25,557,113	$ 26,327,481	$ 27,124,115	$ 27,947,961	$ 28,800,000	$ 29,681,251	$ 30,502,770

TABLE 23: WASTEWATER O&MBY DEPARTMENT

O&M DEFAULT FOR FISCAL YEAR ENDED JUNE 30												
DEPARTMENT	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Dept 505.101-Utilities - Sewer Administration	$ 7,442,420	$ 7,003,942	$ 7,071,570	$ 6,980,610	$ 6,925,945	$ 6,903,051	$ 6,907,000	$ 9,000,091	$ 9,310,430	$ 9,502,201	$ 9,656,047	$ 10,107,302
Total Dept 540.1000/Water Service Center Management	$ 2,113,446	$ 884,446	$ 866,467	$ 844,148	$ 922,849	$ 962,602	$ 953,141	$ 1,014,800	$ 1,047,613	$ 1,081,318	$ 1,116,254	$ 1,152,489
Total Dept 540.3000/WSC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 540.207-Misc-Meter Reading - Sewer	$ 700,610	$ 700,419	$ 702,959	$ 700,270	$ 614,510	$ 641,000	$ 639,700	$ 680,000	$ 920,970	$ 950,140	$ 982,417	$ 1,025,002
Total Dept 540.2300/Misc-Sewer Maint/Construction	$ 2,100,188	$ 2,197,936	$ 2,286,417	$ 2,397,282	$ 3,102,854	$ 3,212,232	$ 3,326,725	$ 3,443,418	$ 3,566,864	$ 3,682,459	$ 3,824,049	$ 3,960,627
Total Dept 580.1000/Wpc-Operations	$ 5,176,142	$ 5,516,166	$ 5,767,152	$ 5,957,629	$ 5,755,176	$ 5,960,058	$ 6,172,481	$ 6,392,768	$ 6,621,295	$ 6,858,238	$ 7,104,048	$ 7,359,024
Total Dept 580.2000/Wpc-Third Ave Pump Station	$ 900,913	$ 735,282	$ 761,801	$ 780,306	$ 817,834	$ 847,425	$ 878,110	$ 909,900	$ 942,900	$ 977,257	$ 1,012,807	$ 1,049,620
Total Dept 580.4000/Wpc-Maintenance Expense	$ 2,817,849	$ 2,912,411	$ 3,009,177	$ 3,109,314	$ 3,212,980	$ 3,320,211	$ 3,431,205	$ 3,545,180	$ 3,666,132	$ 3,788,309	$ 3,916,829	$ 4,047,846
Total Dept 580.5000/WPC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 580.800-Mon_dep_Exp-Sewer Portion	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 966.101-Transfers out to fund 101	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GRAND TOTAL WASTEWATER UTILITY	$ 24,329,627	$ 23,053,302	$ 23,304,671	$ 24,011,980	$ 24,812,101	$ 25,557,113	$ 26,327,481	$ 27,124,115	$ 27,947,961	$ 28,800,000	$ 29,681,251	$ 30,502,770

3.3.3 Wastewater Utility CIP and CIP Financing

Tables 24 and 25 on the following two pages indicate the wastewater capital improvements program ("CIP") provided by the City and the CIP financing plan. As the plan we received from the City was presented in current year dollars, we escalated the project amounts 3% per year from FY 2015 onward. The largest capital projects relate to rehabilitation of the City's wastewater treatment plant and pumping stations. In general, the level of spending in the CIP peaks at from $12 Million in FY 2018 and returns to an average level of around $8 Million going forward.

Table 25 summarizes the wastewater utility CIP financing plan. While the CIP financing plan used for this report only incorporates cash financing, the City may seek to leverage its revenue stream in the future via the issuance of revenue bonds or other alternative financing instruments. This would be particularly beneficial for major wastewater capital improvements, as it would spread the financing responsibility over existing and future ratepayers who receive the benefit of the improvement throughout the asset's useful life.

TABLE 24: WASTEWATER CAPITAL IMPROVEMENTS PROGRAM

WASTEWATER CAPITAL PROJECTS (ESCALATED)																			
Project		Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Pipe Lining	WSC Sewer Fund	$ 1,520,000	$ 1,699,200	$ 1,739,876	$ 1,803,000	$ 1,857,090	$ 1,912,802	$ 1,970,186	$ 2,029,292	$ 2,090,171	$ 2,152,876	$ 2,217,462	$ 2,283,986
Root Control	WSC Sewer Fund	$ 350,000	$ 350,500	$ 371,315	$ 382,454	$ 393,928	$ 405,746	$ 417,918	$ 430,455	$ 443,370	$ 456,671	$ 470,371	$ 484,482
Meter Replacement	WSC Sewer Fund	$ 250,000	$ 1,287,500	$ 1,326,125	$ 54,636	$ 56,275	$ 57,964	$ 59,703	$ 61,494	$ 63,339	$ 65,239	$ 67,196	$ 69,212
Vehicles: Dump Trunk, 2 Vactor Lease Payments, 2 Flatbed Trucks, 1 Tractor	WSC Sewer Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Biosolids Load Out Facility	Water Pollution Control	$ -	$ 2,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Biosolids Load Out Facility Engineering	Water Pollution Control	$ 116,350	$ 92,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Engineering for S2 Grant	Water Pollution Control	$	$	$	$	$	$	$	$	$	$	$	$
EPS Bar Screen Replacement	Water Pollution Control	$ 1,764,547	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Final Tank Retrofit-Four of Eight Tanks	Water Pollution Control	$ 637,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
MWPS Barscreen Replacement	Water Pollution Control	$ 440,522	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
RTB Flowmeter	Water Pollution Control	$ 32,497	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ball B Actuator	Water Pollution Control	$ 19,973	$	$	$	$	$	$	$	$	$	$	$
Sigma Samplers	Water Pollution Control	$ 11,670	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GPS Units	Water Pollution Control	$ 20,995	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TWPS Automation	Water Pollution Control	$ 188,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TWPS Conveyor	Water Pollution Control	$ 12,588	$	$	$	$	$	$	$	$	$	$	$
Lighting Upgrades	Water Pollution Control	$ 159,063	$	$	$	$	$	$	$	$	$	$	$
Disinfection Upgrades	Water Pollution Control	$ 71,575	$ 154,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Replacement of Battery A Grit	Water Pollution Control	$ -	$ -	$ 1,030,900	$ -	$ 2,207,952	$ 579,030	$ 119,400	$ 122,900	$ 126,577	$ 130,477	$ 134,592	$ 100,423
Third Ave Pumping Station Electrical Switchgear	Water Pollution Control	$ -	$ -	$ 1,909,620	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Final Tank Coatings	Water Pollution Control	$	$	$	$	$	$	$	$	$	$	$	$
Major Concrete Repairs	Water Pollution Control	$ -	$ 113,300	$ 365,225	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aeration Blower Replacement	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aeration Blower Controls	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Major Valve Repairs	Water Pollution Control	$ -	$ -	$ 212,180	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Replacement of Lift Stations	Water Pollution Control	$	$	$ 285,225	$	$	$	$	$	$	$	$	$
HVAC Upgrades	Water Pollution Control	$ -	$ 412,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Primary Tank Rebuild	Water Pollution Control	$ -	$ 772,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Curbside Coatings	Water Pollution Control	$ -	$ -	$ -	$ 598,814	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Influent Box Concrete Repairs	Water Pollution Control	$	$	$	$	$	$	$	$	$	$	$	$
Third Ave Pipe Repair	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Plant Roofing	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Replacement Pump for Third Ave Pumping Station	Water Pollution Control	$ -	$ -	$ -	$ -	$ 932,754	$ 579,030	$ 397,068	$ -	$ -	$ -	$ -	$ -
Replacement Pumps for EPS	Water Pollution Control	$ -	$ -	$ -	$ 655,635	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Replacement Pumps for MWPS	Water Pollution Control	$	$	$	$	$	$	$	$	$	$	$	$
Battery B Grit Piping	Water Pollution Control	$ -	$ -	$ -	$ 411,737	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Air Diffuser Upgrades-Battery B	Water Pollution Control	$ -	$ -	$ -	$ 104,277	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4160 Volt Switchgear	Water Pollution Control	$ -	$ -	$ -	$ 2,185,454	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Battery B Isolation Gates	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EPS Switchgear	Water Pollution Control	$	$	$	$	$	$	$	$	$	$	$	$
Addition to Vehicle Storage Building	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lift Station Electrical Upgrades	Water Pollution Control	$ -	$ -	$ -	$ 91,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Final Effluent Meter Replacement	Water Pollution Control	$ -	$ -	$ -	$ 109,273	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lighting Pond Upgrades	Water Pollution Control	$	$	$	$ 87,418	$	$	$	$	$	$	$	$
Blower Heater Installation	Water Pollution Control	$ -	$ -	$ -	$ 437,091	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Battery A Influent Meter Replacement	Water Pollution Control	$ -	$ -	$ -	$ 109,273	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sludge Cake Storage	Water Pollution Control	$ -	$ -	$ -	$ 327,818	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Heavy Mobile Equipment	Water Pollution Control	$ -	$ -	$ -	$ 163,909	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Air Diffuser Upgrades Battery A	Water Pollution Control	$	$ 195,700	$	$	$	$	$	$	$	$	$	$
Riverbank Improvements	Water Pollution Control	$ -	$ 82,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Final Tank Retrofit-Last Four Tanks	Water Pollution Control	$ -	$ 636,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Vehicles	Water Pollution Control	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Outgoing System Recapitalization	WSC Sewer Fund	$ -	$ -	$ 2,121,800	$ 2,185,454	$ 3,376,526	$ 4,637,096	$ 4,776,209	$ 4,919,495	$ 5,067,080	$ 5,219,093	$ 5,375,666	$ 5,536,936
		$ 5,205,676	$ 7,220,300	$ 9,272,266	$ 9,783,185	$ 11,754,526	$ 8,772,882	$ 7,940,448	$ 7,853,724	$ 7,790,636	$ 8,024,395	$ 8,265,086	$ 8,513,038

TABLE 25: WASTEWATER CIP FINANCING PLAN

Water Construction Fund/Account		Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Beginning CIP Fund Balance													
Beginning Year Construction Fund Balance		$ -	$ 294,024	$ 74,024	$ 301,758	$ 18,573	$ 764,047	$ 91,165	$ 150,717	$ 86,990	$ 296,367	$ 272,002	$ 6,916
Carry-Over CIP from Previous Year		$ -											
Net Funds Available for Current CIP		$ -	$ 294,024	$ 74,024	$ 301,758	$ 18,573	$ 764,047	$ 91,165	$ 150,717	$ 86,990	$ 296,367	$ 272,002	$ 6,916
Sources of CIP Financing													
Wastewater Revenue Bonds Issued		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wastewater Commercial Paper Program		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wastewater Rate Revenue Financing (Cash)		$ 5,600,000	$7,000,000	$ 9,500,000	$ 9,500,000	$ 12,500,000	$ 7,500,000	$ 8,000,000	$ 7,500,000	$ 8,000,000	$ 8,000,000	$ 8,000,000	$ 8,500,000
SDC Receipts Used for CIP Financing													
Other Sources of CIP Financing													
		$ 5,600,000	$7,294,024	$ 9,574,024	$ 9,801,758	$ 12,518,573	$ 8,264,047	$ 8,091,165	$ 7,650,717	$ 8,086,990	$ 8,296,367	$ 8,272,002	$ 8,506,916
Uses of CIP Funds													
Total WSC Sewer fund		$ 2,120,000	$3,397,200	$ 5,555,116	$ 4,425,544	$ 5,883,819	$ 1,013,608	$ 7,224,016	$ 7,440,737	$ 7,853,999	$ 7,893,878	$ 8,130,694	$ 8,371,615
Total Water Pollution Control		$ 3,085,876	$3,883,100	$ 3,713,150	$ 5,367,640	$ 6,070,706	$ 1,159,274	$ 716,431	$ 122,987	$ 126,671	$ 130,477	$ 134,392	$ 138,423
Additional Uses													
Total Current Year CIP		$ 5,205,876	$7,280,300	$ 9,272,266	$ 9,793,185	$ 11,954,526	$ 8,172,882	$ 7,940,448	$ 7,563,724	$ 7,980,670	$ 8,024,355	$ 8,265,086	$ 8,510,038
Bond Issuance Costs		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Refunding of Commercial Paper		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
EQUALS: Ending CIP Fund Balance		$294,124	$74,024	$301,758	$18,573	$764,047	$91,165	$150,717	$86,990	$296,367	$272,002	$6,916	($6,122)
Targe Balance (% of Next Years CIP)	25.00%	$ 1,805,075	$2,318,067	$ 2,445,796	$ 2,938,631	$ 2,043,221	$ 1,985,112	$ 1,890,931	$ 1,947,689	$ 2,006,068	$ 2,056,271	$ 2,128,280	$ -
Variance from Target		($1,510,751)	($2,244,042)	($2,144,038)	($2,920,058)	($1,279,173)	($1,893,947)	($1,740,214)	($1,860,686)	($1,709,731)	($1,784,269)	($2,121,343)	($6,122)

3.3.4 Wastewater Cash Flow Forecast

The final step in the development of the wastewater utility financial plan involves the preparation of a comprehensive cash flow forecast. A summary of the wastewater cash flow forecast is presented in Table 26 on the following page. The key components of the forecast are Financial Plan Inputs, Revenues, Expenditures, and Operating Performance.

The Financial Plan Inputs component indicates the forecast rate revenue increases. These increases were determined in consultation with City staff and are designed to:

- Ensure recovery of wastewater utility O&M expenditures
- Provide cash financing for the wastewater capital projects outlined in the CIP
- Minimize risk via the build-up of operating reserves equivalent to 90 days of O&M and Debt Service

The Revenues component indicates the revenue at existing rates discussed previously, non-rate revenue and the additional revenue generated by the rate revenue increases shown in the inputs section. Given the forecast of wastewater demand, O&M and capital expenditures and the 90 Day operating benchmark, the "additional revenue" line represents the amount of revenue needed—above existing rate revenues—to ensure adequate recovery of the wastewater utility's revenue requirement going forward.

The Expenditures component indicates the major sources of expenditures for the City's wastewater utility: O&M expenditures, Capital expenditures (Rate Revenue Financing and Debt Service) and Transfers to the Operating Reserve.

The Operating performance section indicates the year end position of the wastewater utility with respect to a few key factors. Included are the estimated operating reserve balance, the target reserve balance (90 Days of O&M and Debt Service), and the construction fund ending balance.

TABLE 26: WASTEWATER CASH FLOW FORECAST

Wastewater Utility	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
FINANCIAL PLAN INPUTS												
Cumulative % Increase		7.5%	15.1%	23.1%	28.6%	31.2%	33.8%	36.5%	39.2%	42.1%	44.8%	47.7%
Annual % Increase in Rate Revenues	0.0%	7.5%	7.0%	7.0%	4.5%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
REVENUES												
Gross Total Wastewater Revenue at Existing Rates	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374	$ 27,777,374
Additional Revenue from Rate Increases	$ -	$ 2,033,000	$ 4,173,500	$ 6,440,100	$ 7,948,500	$ 8,663,000	$ 9,381,300	$ 10,352,200	$ 10,880,500	$ 11,666,900	$ 12,456,800	$ 13,260,500
Total Non-Rate Revenues	$ 395,372	$ 423,662	$ 451,948	$ 480,068	$ 507,741	$ 535,354	$ 561,178	$ 590,171	$ 596,437	$ 612,261	$ 627,951	$ 643,618
Add Transfers in from General Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Rate and Non-Rate Revenues	*$ 28,172,746*	*$ 30,234,237*	*$ 32,371,823*	*$ 34,613,542*	*$ 36,148,616*	*$ 36,975,728*	*$ 37,970,242*	*$ 38,722,865*	*$ 39,207,231*	*$ 39,956,535*	*$ 40,861,716*	*$ 41,678,492*
EXPENDITURES												
Total O&M Expenditures	*$ 24,323,527*	*$ 23,653,392*	*$ 23,394,671*	*$ 24,051,589*	*$ 24,812,101*	*$ 25,557,115*	*$ 26,327,481*	*$ 27,124,165*	*$ 27,947,961*	*$ 28,800,000*	*$ 29,681,251*	*$ 30,592,770*
Gross Total Existing and Proposed Debt Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wastewater Rate Revenue Financing (Cash)	$ 5,700,000	$ 7,700,000	$ 9,900,000	$ 9,900,000	$ 12,700,000	$ 8,700,000	$ 8,700,000	$ 7,900,000	$ 8,700,000	$ 9,700,000	$ 8,700,000	$ 8,700,000
Wastewater Transfer to Equipment Replacement Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Expenditures	*$ 5,700,000*	*$ 7,700,000*	*$ 9,900,000*	*$ 9,900,000*	*$ 12,700,000*	*$ 8,700,000*	*$ 8,700,000*	*$ 7,900,000*	*$ 8,700,000*	*$ 9,700,000*	*$ 8,700,000*	*$ 8,700,000*
Add Net Surplus/Deficit	*$ (1,850,781)*	*$ 200,845*	*$ (922,848)*	*$ 1,061,953*	*$ (363,485)*	*$ 3,322,613*	*$ 3,942,761*	*$ 3,698,700*	*$ 3,559,270*	*$ 3,156,535*	*$ 3,179,913*	*$ 2,225,723*
CROSS REVENUE REQUIREMENTS												
O&M	$ 24,323,527	$ 23,653,392	$ 23,394,671	$ 24,051,589	$ 24,812,101	$ 25,557,115	$ 26,327,481	$ 27,124,165	$ 27,947,961	$ 28,800,000	$ 29,681,251	$ 30,592,770
Capital	$ 5,700,000	$ 7,700,000	$ 9,900,000	$ 9,900,000	$ 12,700,000	$ 8,700,000	$ 8,700,000	$ 7,900,000	$ 8,700,000	$ 9,700,000	$ 8,700,000	$ 8,700,000
Operating Surplus/Deficit	$ (1,850,781)	$ 200,845	$ (922,848)	$ 1,061,953	$ (363,485)	$ 3,322,613	$ 3,942,761	$ 3,698,700	$ 3,559,270	$ 3,156,535	$ 3,179,913	$ 2,225,723
Total Gross Revenue Requirements	*$ 28,172,746*	*$ 30,234,237*	*$ 32,371,823*	*$ 34,613,542*	*$ 36,148,616*	*$ 36,975,728*	*$ 37,970,242*	*$ 38,722,865*	*$ 39,207,231*	*$ 39,956,535*	*$ 40,861,716*	*$ 41,678,492*
OPERATING PERFORMANCE												
Ending Operating Reserve Balance	$ 5,307,252	$ 5,508,097	$ 5,015,249	$ 6,077,202	$ 5,713,716	$ 17,696,341	$ 21,639,102	$ 24,847,672	$ 28,106,991	$ 31,263,665	$ 34,423,583	$ 36,949,252
Target Operating Reserve Balance	$ 6,080,907	$ 5,913,348	$ 5,848,668	$ 6,012,892	$ 6,203,025	$ 6,389,276	$ 6,581,970	$ 6,781,029	$ 6,986,990	$ 7,200,000	$ 7,420,313	$ 7,648,193
Variance From Target	$ (773,656)	$ (405,251)	$ (833,419)	$ 64,310	$ (489,309)	$ 11,307,065	$ 14,957,132	$ 18,066,643	$ 21,120,001	$ 24,063,665	$ 27,003,270	$ 29,301,059
Conservation Fund Ending Balance	$ 204,324	$ 74,024	$ 307,753	$ 18,573	$ 268,044	$ 91,116	$ 150,719	$ 86,993	$ 206,357	$ 292,002	$ 3,916	$ (6,720)
Stand Alone DSCR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

4. WATER UTILITY COST OF SERVICE STUDY

Following the determination of the water utility financial plan, the next steps are to summarize the water utilities total rate revenue requirement, determine the proportion of that requirement which is attributable to each customer class, and calculate the volumetric and fixed rates.

4.1 WATER REVENUE REQUIREMENT FROM RATES

Table 27 below indicates the level of water utility expenditures which must be recovered from rates in the FY 2015 test year and each year of the forecast period. It is comprised of the forecast water utility O&M and capital expenditures, and is offset by non-rate revenues the water utility is anticipated to receive over the forecast period. The total test year revenue requirement is approximately $34 Million.

TABLE 27: WATER REVENUE REQUIREMENTS

OPERATION AND MAINTENANCE EXPENDITURES												
Revenue/Expense Item	Budget Year FY2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Dept 536.1000 Utilities - Water Administration	$ 7,492,304	$ 7,718,511	$ 7,945,452	$ 8,179,197	$ 8,419,955	$ 8,667,940	$ 8,923,374	$ 9,186,466	$ 9,457,512	$ 9,736,685	$ 10,024,268	$ 10,320,548
Total Dept 536.2060 Utilities - Water Cross Connection Pr	$ 104,509	$ 108,204	$ 112,037	$ 116,015	$ 120,142	$ 24,436	$ 128,872	$ 133,488	$ 138,279	$ 143,254	$ 148,119	$ 153,782
Total Dept 540.1000 Water Service Center Management	$ 1,223,240	$ 1,244,890	$ 1,284,276	$ 1,324,940	$ 1,366,925	$ 1,410,276	$ 1,455,037	$ 1,501,257	$ 1,548,986	$ 1,598,273	$ 1,649,172	$ 1,701,738
Total Dept 540.3000 WSC - Capital improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 540.2000 Wsc-Meter Reading - Water	$ 730,577	$ 533,281	$ 551,623	$ 570,642	$ 590,360	$ 610,779	$ 631,957	$ 653,913	$ 676,677	$ 700,281	$ 724,799	$ 750,145
Total Dept 540.2020 Wsc-Water Distribution Mains	$ 3,250,559	$ 3,898,236	$ 3,824,449	$ 3,955,207	$ 4,090,691	$ 4,231,081	$ 4,376,566	$ 4,527,344	$ 4,683,618	$ 4,845,604	$ 5,013,523	$ 5,187,608
Total Dept 545.2000 Water Plant - Operations	$ 21,645,150	$ 5,420,000	$ 5,000,004	$ 6,200,105	$ 6,402,000	$ 6,670,000	$ 6,035,922	$ 7,000,291	$ 7,277,975	$ 7,495,215	$ 7,720,102	$ 7,950,729
Total Dept 545.2010 Water Plant Maintenance	$ 1,288,821	$ 1,629,451	$ 1,684,113	$ 1,740,751	$ 1,799,361	$ 1,860,043	$ 1,922,875	$ 1,987,937	$ 2,055,313	$ 2,125,091	$ 2,197,362	$ 2,272,219
Total Dept 545.2020 Water Plant - Dam Operations	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 545.2030 Water Plant - Dam Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 545.3000 Water Plant - Capital improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 966.101-Transfers out to fund 101	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000
Total Operation and Maintenance Expenditures	$ 36,865,206	$ 21,483,441	$ 22,140,012	$ 23,316,457	$ 23,393,504	$ 24,705,148	$ 25,434,603	$ 26,188,715	$ 26,968,360	$ 27,774,446	$ 28,607,324	$ 29,463,768
CAPITAL EXPENDITURES												
Revenue/Expense Item	Budget Year FY2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Grand Total Existing and Proposed Debt Service	$ 2,747,946	$ 2,742,821	$ 2,746,428	$ 9,648,446	$ 9,644,008	$ 9,643,196	$ 9,639,827	$ 9,192,721	$ 8,676,674	$ 8,085,628	$ 8,423,746	$ 6,904,000
Water Rate Revenue Financing (Cash)	$ 7,000,000	$ 9,000,000	$ 8,900,000	$ 6,900,000	$ 6,000,000	$ 6,800,000	$ 7,800,000	$ 7,800,000	$ 7,800,000	$ 8,000,000	$ 8,800,000	$ 8,800,000
Add Net Operating Surplus/(Deficit)	$ (2,752,778)	$ 2,087,727	$ 3,865,883	$ (791,543)	$ 163,465	$ 25,662	$ (897,311)	$ (83,835)	$ 492,328	$ 634,593	$ (166,883)	$ 1,390,788
Add Water Transfers to Equipment Replacement Fu	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Expenditures	$ 6,995,168	$ 13,830,548	$ 14,512,315	$ 15,756,903	$ 15,807,474	$ 16,268,858	$ 16,542,517	$ 16,908,886	$ 16,969,002	$ 16,720,187	$ 16,057,077	$ 16,590,788
GROSS REVENUE REQUIREMENT FROM RATES	$ 43,860,374	$ 35,313,989	$ 37,052,328	$ 38,073,361	$ 39,806,978	$ 40,974,006	$ 41,977,120	$ 42,797,601	$ 43,937,362	$ 44,494,633	$ 45,365,002	$ 46,260,556
NON-RATE REVENUES												
Revenue/Expense Item	Budget Year FY2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Non-Rate Revenues	$ 886,000	$ 913,314	$ 931,644	$ 927,686	$ 928,503	$ 929,131	$ 931,145	$ 930,726	$ 933,187	$ 936,360	$ 935,527	$ 942,481
NET REVENUE REQUIREMENT FROM RATES	$ 42,974,374	$ 34,400,675	$ 36,120,685	$ 37,146,075	$ 38,878,475	$ 40,044,875	$ 41,045,975	$ 41,866,875	$ 42,704,175	$ 43,558,275	$ 44,429,475	$ 45,318,075

4.2 WATER REVENUE REQUIREMENTS BY CUSTOMER CLASS

Following the development of the total test year revenue requirement, the proportion of the total revenue requirement allocable to each customer class must be determined. This allocation represents the level of revenues that must be recovered from each customer class, given the operational demands that class places on the water utility system. This allocation is performed via the multi-step process described below.

4.2.1 O&M Allocation to Function Categories

The first step in determining revenue requirements by customer class is to allocate the test year O&M revenue requirement to functional categories. These categories are functions that the water utility must perform in order to deliver water service to City customers. For the water utility they are: Administrative and General, Customer Service, Source of Supply, Pumping, Treatment, Storage, Transmission Mains, Distribution Mains, Meters and Services and Hydrants.
The O&M allocations, by department, are shown in Table 28 on the following page.

TABLE 28: WATER O&M ALLOCATION TO FUNCTIONAL CATEGORIES

DEPARTMENT	Total $ Allocation	Administrative and General	Customer Service	Source of Supply	Pumping	Treatment	Storage	Transmission Mains	Distribution Mains	Meters and Services	Hydrants
Total Dept 535.100-Utilities - Water Administration	$ 7,718,511	$ 7,718,511	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 535.205-Utilities - Water Cross Connection P	$ 108,204	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 108,204	$ -	$ -
Total Dept 510.100-Water Service Center Management	$ 1,244,890	$ -	$ 1,244,890	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 510.300-WSC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 510.200-Water Meter Reading - Water	$ 630,281	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 630,281	$ -
Total Dept 510.202-Water Water Distribution Mains	$ 3,888,236	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,888,236	$ -	$ -
Total Dept 515.200-Water Plant - Operations	$ 5,420,888	$ -	$ -	$ -	$ -	$ 5,420,888	$ -	$ -	$ -	$ -	$ -
Total Dept 515.201-Water Plant Maintenance	$ 1,629,451	$ -	$ -	$ -	$ -	$ 1,629,451	$ -	$ -	$ -	$ -	$ -
Total Dept 515.202-Water Plant - Non Operations	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 515.203-Water Plant - Non Maintenance	$	$	$	$	$	$	$	$	$	$	$
Total Dept 515.300-Water Plant - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 965.10 - Transfers out to Fund 101	$ 1,130,000	$ 1,130,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GRAND TOTAL WATER UTILITY	$ 21,483,441	$ 8,848,511	$ 1,244,890	$ -	$ -	$ 7,050,339	$ -	$ -	$ 3,996,440	$ 630,281	$ -

4.2.2 O&M Allocation to Cost Components

Once O&M costs have been allocated to functional categories, the total O&M revenue requirement allocated to each functional category must be further allocated based on the operational need that function is designed to fulfill. For this allocation RFC has utilized the "Base Extra Capacity" method described in the American Water Works Association ("AWWA") publication, "Manual of Water Supply Practices M1, Principles of Rates, Fees and Charges (M1)."

The cost components utilized in this study are: base demand, or water demand under average conditions; maximum day and hour demand, or water demand under peak load conditions; customer service, for functions related to customer billing and service; and fire protection, for functions pertaining to the use of public hydrants and private fire lines. Table 29 below indicates the classification of water O&M expenditures to the cost components described above.

TABLE 29: WATER O&M ALLOCATION TO COST COMPONENTS

		$ Allocation							
		Base	Max Day Extra	Max Hour Extra	Customer Units Equivalent Meters		Fire Protection Private Fire		Public Fire
FUNCTIONAL CLASSIFICATION	Total $ Allocation	Demand	Capacity	Capacity	& Services	Bills	Equivalent Connections	Bills	Hydrants
Administrative and General	$ 8,848,611	$ 2,791,451	$ 4,461,013	$ 380,496	$ 1,215,291	$ -	$ -	$ -	$ -
Customer Service	$ 1,244,080	$ -	$ -	$ -	$ 1,244,080	$ -	$ -	$ -	$ -
Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Pumping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Treatment	$ 7,090,319	$ 2,717,572	$ 4,372,747	$ -	$ -	$ -	$ -	$ -	$ -
Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Transmission Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Distribution Mains	$ 3,806,441	$ 1,288,813	$ 2,002,996	$ 514,631	$ -	$ -	$ -	$ -	$ -
Meters and Services	$ 633,281	$ -	$ -	$ -	$ 633,281	$ -	$ -	$ -	$ -
Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ 21,483,441	$ 6,778,137	$ 10,836,756	$ 895,127	$ 3,092,652	$ -	$ -	$ -	$ -

4.2.3 Capital Cost Allocation to Functional Components

Similar to the allocation of the O&M revenue requirement described in the previous section, the capital revenue requirement must be allocated to functional categories. Table 30 on the following page indicates the functional allocation of capital costs.

The basis for the allocation of capital costs was the existing level of water utility investment in fixed assets. The existing net book value of each major asset class was allocated to the functional categories. The total capital revenue requirement, approximately 14 Million in the test year, was then allocated according to the proportion of existing investment in each functional category. As indicated, a large proportion of investment in fixed assets pertains to upgrades to the City's water treatment plant. As such, the majority of the capital revenue requirement (68%) has been allocated to the treatment function.

TABLE 30: WATER CAPITAL ALLOCATION TO FUNCTIONAL CATEGORIES

Allocation of Capital Costs to Functional Categories

	Total	Administrative and General	Customer Service	Source of Supply	Pumping	Treatment	Storage	Transmission Mains	Distribution Mains	Meters and Services	Hydrants
Breakdown of Fixed Assets by Functional Category	100%	0.21%	0.00%	9.53%	0.48%	68.39%	0.00%	0.00%	19.26%	2.09%	0.04%
Total Capital Expenditures	$ 13,830,548	$ 29,611	$ -	$ 1,317,605	$ 66,010	$ 9,458,192	$ -	$ -	$ 2,663,837	$ 289,678	$ 5,613

$ Allocation of Water Fixed Assets to Functional Categories

FIXED ASSET CATEGORY	Net Book value	Administrative and General	Customer Service	Source of Supply	Pumping	Treatment	Storage	Transmission Mains	Distribution Mains	Meters and Services	Hydrants
01 Land	$ 724,317	$ 73,998	$ -	$ 60,947	$ 6,339	$ 34,939	$ -	$ -	$ 5,090	$ -	$ -
02 Construction in Progress	$ 755,881	$ 1,618	$ -	$ 71,992	$ 3,637	$ 516,782	$ -	$ -	$ 145,548	$ 15,828	$ 307
20 land improvement	$ 199,888	$ 425	$ -	$ 18,929	$ 948	$ 135,875	$ -	$ -	$ 38,268	$ 4,161	$ 81
21 Building Improvements	$ 7464,810	$ 7,418	$ -	$ 390,084	$ 16,579	$ 2,269,448	$ -	$ -	$ 867,209	$ 72,571	$ 1,406
23 Dist Plant - Hydrants	$ 16,458	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,458
24 Dist Plant - Water mains	$ 7175,835	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,175,835	$ -	$ -
25 Dist Plant - Meters	$ 849,348	$	$	$	$	$	$	$	$	$ 849,348	$
26 Dist - Struc & Improv	$ 629,696	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 629,696	$ -	$ -
27 Lab Equip	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
200 Office Equip & Furn.	$ 12,023	$ 12,023	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
29 power operated equip.	$ 6,000	$ 13	$ -	$ 572	$ 29	$ 4,103	$ -	$ -	$ 1,195	$ 126	$ 2
31 Pump Plant (Electric Pump Equip)	$ 120,531	$ -	$ -	$ -	$ 120,531	$ -	$ -	$ -	$ -	$ -	$ -
32 Pump Plant - Struc & Imp	$ 66,574	$ -	$ -	$ -	$ 66,574	$ -	$ -	$ -	$ -	$ -	$ -
33 Source of Supplies - Main (Pipe Line)	$ 2475,415	$ -	$ -	$ 2,475,415	$ -	$ -	$ -	$ -	$ -	$ -	$ -
34 Source of Water Supplies - Structure	$ 780,912	$ -	$ -	$ 780,912	$ -	$ -	$ -	$ -	$ -	$ -	$ -
35 Tools Cars, & Garage Eq	$ 3,080	$ 7	$ -	$ 293	$ 15	$ 2,107	$ -	$ -	$ 599	$ 65	$ 1
36 Vehicle	$ 348,753	$ 747	$ -	$ 33,225	$ 1,655	$ 238,499	$ -	$ -	$ 67,172	$ 7,305	$ 142
37 Treatment - Struc & Impr	$ 384,545	$ -	$ -	$ -	$ -	$ 384,545	$ -	$ -	$ -	$ -	$ -
38 Treatment Plant Equip	$ 115,892	$ -	$ -	$ -	$ -	$ 115,892	$ -	$ -	$ -	$ -	$ -
DWRLF Phase 1/Seg 1 Total	$ 3976,530	$ -	$ -	$ -	$ -	$ 3,976,530	$ -	$ -	$ -	$ -	$ -
DWRLF Phase 1/Seg 2 Total	$ 4366,011	$ -	$ -	$ -	$ -	$ 4,366,011	$ -	$ -	$ -	$ -	$ -
DWRLF Phase 1/Seg 3 Total	$ 4388,566	$ -	$ -	$ -	$ -	$ 4,388,566	$ -	$ -	$ -	$ -	$ -
DWRLF Phase 1/Seg 4 Total	$ 7579,456	$ -	$ -	$ -	$ -	$ 7,579,456	$ -	$ -	$ -	$ -	$ -
DWRLF Phase 1/Seg 5 Total	$ 6885,886	$ -	$ -	$ -	$ -	$ 6,885,886	$ -	$ -	$ -	$ -	$ -
Total Water Fixed assets	$ 45338,750	$ 97,049	$ -	$ 4,318,369	$ 216,340	$ 30,998,634	$ -	$ -	$ 8,730,557	$ 949,401	$ 18,397
%Breakdown	100.00%	0.21%	0.00%	9.53%	0.48%	68.39%	0.00%	0.00%	19.26%	2.09%	0.04%

4.2.4 Capital Cost Allocation to Cost Components

As with the allocation of the O&M revenue requirement described above, the functionally allocated capital revenue requirement must also be allocated according to the operational need for which each function is designed to fulfill.

The "Base Extra Capacity" method described in AWWA M1 is also used to allocate the capital revenue requirement to cost components. Table 31 below summarizes this allocation.

TABLE 31: WATER CAPITAL ALLOCATION TO COST COMPONENTS

		$ Allocation								
		Base	Max Day Extra	Max Hour Extra	Customer Units Equivalent Meters		Fire Protection Private Fire		Public Fire
FUNCTIONAL CLASSIFICATION	Total $ Allocation	Demand	Capacity	Capacity	& Services	Bills	Equivalent Connections	Bills	Hydrants
Administrative and General	21,811	-	-	-	20611	-	-	-	-
Customer Service	-	-	-	-	-	-	-	-	-
Source of Supply	1,317,805	1,317,805	-	-	-	-	-	-	-
Pumping	65,010	25,444	40,566	-	-	-	-	-	-
Treatment	9,453,193	3,640,697	5,812,497	-	-	-	-	-	-
Storage	-	-	-	-	-	-	-	-	-
Transmission Mains	-	-	-	-	-	-	-	-	-
Distribution Mains	2,683,887	887,946	1,415,891	380,200	-	-	-	-	-
Meters and Services	289,678	-	-	-	289678	-	-	-	-
Hydrants	50,013	50,013	-	-	-	-	-	-	-
Total Capital Expenditures	13,830,598	5,882,905	7,268,954	380,200	310288	-	-	-	-

4.2.5 Non-Rate Revenue Allocation to Cost Components

Non-rate revenue must be excluded from the O&M and Capital revenue requirements as these amounts are an offset to the revenue requirement which will be recovered from rates. Consequently, non-rate revenues are allocated to the cost components so that they can be removed from the total revenue requirement. In this case, non-rate revenues were allocated proportionally according to the total O&M revenue requirement allocation and can be seen in Table 32 on the below.

TABLE 32: WATER NON-RATE REVENUE ALLOCATION TO COST COMPONENTS

			$ Allocation							
			Base	Max Day Extra	Max Hour Extra	Customer Units Equivalent Meters		Fire Protection Private Fire		Public Fire
ACCOUNT CODE	DESCRIPTION	Total $ Allocation	Demand	Capacity	Capacity	& Services	Bills	Equivalent Connections	Bills	Hydrants
591636.100615000	Fees - Utilities - Bike Regn	-	-	-	-	-	-	-	-	-
591636.100642000	Charges For Sale	-	-	-	-	-	-	-	-	-
591636.100648000	Scrap Sales	6,000	1,578	2,616	204	704				
591636.100657000	Fines - Turn On Fees - Utilities	120,000	31,561	60,353	4,888	16,888	-	-	-	-
591636.100657100	Forfeited Discount - Utilities	380,000	110,427	146,088	14,258	49,257	-	-	-	-
591636.100665000	Interest Earned On Bank Chg &	27,314	8,618	13,740	1,113	3844	-	-	-	-
591636.100670000	Rental - City Property	-	-	-	-	-	-	-	-	-
591636.100673400	Sale Of Fixed Assets	25,000	7,888	12,576	1,018	3518				
591636.100696000	Discounts Earned	-	-	-	-	-	-	-	-	-
591636.100697000	Prior Year Revenue	-	-	-	-	-	-	-	-	-
591640.100643000	Meter Water Sales									
591640.100648000	Scrap Sales	-	-	-	-	-	-	-	-	-
591640.100670000	Rental - City Property	-	-	-	-	-	-	-	-	-
591640.100697000	Reimbursements	-	-	-	-	-	-	-	-	-
591640.206801900	Machine & Job Charge Service	180,000	47,341	85,454	11,100	31,111	-	-	-	-
591640.206842000	Charges For Sale									
591640.206801900	Machine & Job Charge Service	236,000	74,459	118,714	9,614	33213	-	-	-	-
591645.200615000	Fees - Water testing - Utilities	-	-	-	-	-	-	-	-	-
591645.200642000	Charges For Sale	-	-	-	-	-	-	-	-	-
591645.200648000	Scrap Sales	-	-	-	-	-	-	-	-	-
591645.200671300	Other Income									
591645.200697000	Reimbursements	-	-	-	-	-	-	-	-	-
591645.200696000	Discounts Earned	-	-	-	-	-	-	-	-	-
Add Transfers in from General Fund		-	-	-	-	-	-	-	-	-
Total Non-Rate Revenues		910,314	200,155	439,419	37,205	120,535	-	-	-	-

4.2.6 Determination of Maximum Day and Hour Peaking Factors

Once each component of the revenue requirements has been determined, maximum day and hour peaking factors for each customer class are estimated. These are the basis upon which the maximum day and hour cost allocations, determined in the previous step, are allocated to each customer class. In general, the guidelines for determining maximum day and hour peaking factors outlined in AWWA M1 were the basis for this component of the analysis.

The maximum day demand for each customer class is estimated as the average usage per day in the highest usage month, divided by the annual average usage per day, weighted by the ratio of maximum day demand to the average demand in the maximum month for the entire water system. In other words:

- System Max Day to Average Day in Max Month=(System Max Day Demand)/(System Max Month/30)
- Class Maximum Day=[(Class Max Month/30)/(Class Annual Total)/365]*[System Max Day to Average Day in Max Month]

The weighting occurs because the exact maximum day, by customer class is not known, but is assumed to have the same relationship to the average day in the maximum month as the entire system. As the exact customer class maximum hour is not known, a similar weighting process occurs to determine the customer class maximum hour demands:

- System Max Hour to Average Day in Max Month=(System Max Hour)/(System Max Month/30)
- Class Maximum Hour=Class Max Day*System Max Hour to Average Day in Max Month

The determination of customer class peaking factors is shown in Table 33 on the below.

TABLE 33: WATER PEAKING FACTOR CALCULATIONS

System Production Metrics

	Annual Total	System Annual Average Day	System Max Month	Average Day in Max Month	System Max Day	System Max Day to Average Day	System Max Day to Average Day in Max Month	System Max Hour Peak (Estimated)	System Max Hour	System Max Hour to Average Day	System Max Hour to Average Day in Max Month
Tot System	3,485,892	9,550	425,416	14,214	24,771	2.59	1.74	500	28,651	3.00	2.02

Determination of Customer Class Peaking Factors

Customer Class	Annual Total	Max Month	Max Day in Max Month	Annual Average Day	Max to Average Day Ratio	System Max to Average Day	Max Day Peaking Factor	System Max Hour to Average Day	Max Hour Peaking Factor
INSIDE CITY SERVICE									
Tot Inside City Residential	2,882,952	227,019	7,301	6,783	1.08	1.75	2.52	1.95	4.57
Tot Inside City Commercial/Industrial	568,578	88,367	5,686	1,586	3.59	1.75	2.63	1.95	5.24
Tot Inside City Lawn	13,008	5,105	170	37	4.64	1.75	4.15	1.95	15.00
Tot Inside City	3,440,210	424,474	14,149	9,490	1.50	1.75	2.62	1.95	5.11
OUTSIDE CITY SERVICE									
Tot Outside City Residential	8,630	1,216	41	24	1.71	1.75	3.00	1.95	5.85
Tot Outside City Commercial/Industrial	27,243	4,257	142	77	1.85	1.75	3.24	1.95	6.33
Tot Outside City Lawn	-	-	-	-		1.75		1.95	
Tot Outside City	36,873	4,864	162	100	1.62	1.75	2.83	1.95	5.52
Tot System	3,485,892	425,416	14,214	9,590	1.49				

4.2.7 Calculation of Units of Service

The next step in the cost allocation process is to summarize the units of service, which are the basis for the allocation of the total revenue requirement to each of the customer classes. The units are Base units, Maximum Day Extra Capacity units, Maximum Hour Extra Capacity units, Customer units and Direct Fire Protection Units and are indicated in Table 34 on the following page.

Base units are the annual usage for each customer class. Maximum Day Extra Capacity units represent the water demand in excess of that which is used on an average day for that customer class, and is a function of the average daily usage and the customer class peaking factor determined in the prior step.

As an example, the residential class is forecast to use 1.7 Million CCF on an annual basis in the test year. This equates to 4,700 CCF/day on an average day. Based on the maximum day peaking factor determined in the previous step, Residential customers, on their highest usage day of the year, typically use 1.7 times their average day usage, or around 8,200 CCF. The difference between the maximum day and average day, around 3,500 CCF, represents the Maximum Day Extra Capacity units.

A similar calculation is used to determine the Maximum Hour Extra Capacity Units, which are simply the usage forecast in the highest hour of the test year, less the maximum day demand.

Customer Units are equivalent meters, and customer monthly bills. The number of bills for each customer class was ascertained via an examination of the billing data from the City's Customer Information System ("CIS"). The equivalent meters are the number of customer meters at each meter size weighted by the potential water demand each meter can place on the water system.

Private fire connections and hydrants were not included as the City does not currently bill separately for public or private fire protection.

TABLE 34: WATER UNITS OF SERVICE

Water Units of Service	Base Units		Maximum Day Extra Capacity Units			Maximum Hour Extra Capacity Units			Customer Units		Direct Fire Protection	
CUSTOMER CLASS	Forecast Annual Demand CCF	Forecast Average Day Demand	Capacity Factor	Total Capacity	Extra Capacity	Capacity Factor	Total Capacity	Extra Capacity	Equivalent Meters & Services	Bills	Private Fire Equivalent Connections	Public Fire Bills Hydrants
INSIDE CITY RETAIL CONSUMPTION REVENUE												
Total Inside City Residential	1,745,595	4,782	2.52	12,053	7,281	4.92	23,524	11,480	25,621	301,317		
Total Inside City Commercial/Industrial	1,484,239	4,066	2.69	10,932	6,866	5.24	21,317	10,385	8,908	15,210		
Total Inside City Lawn	12,586	34	8.12	280	245	15.83	546	266	138	656		
Total Inside City	3,242,360	8,883		23,275	14,392	26	45,387	22,112	34,669	317,082		
OUTSIDE CITY RETAIL CONSUMPTION REVENUE												
Total Outside City Residential	8,112	22	3.00	67	44	5.85	130	63	128	1,503		
Total Outside City Commercial/Industrial	26,266	72	3.24	233	161	6.33	455	222	166	417		
Total Outside City Lawn	0	0	0.00			0.00						
Total Outside City	34,379	94		300	206	12	585	285	295	1,920		
Grand Total System Units of Service	3,276,738	8,977		23,575	14,598	38	45,972	22,397	34,964	319,002		

4.2.8 Unit Cost of Service

Following the allocation of the water revenue requirements to each of the cost components and the calculation of the units of service, a unit cost of service for each cost component can be determined. These unit costs are basis by which the revenue requirements by customer class are determined. The unit cost of service is the revenue requirement, as allocated to the cost components, divided by the units of service attributable to that component and is shown in Table 35 below.

TABLE 35: WATER UNIT COST OF SERVICE

Water Units of Service								
			Max	Max	Customer Units		Direct Fire Protection	
		Base	Day	Hour			Private Fire	Public Fire
CUSTOMER CLASS		Demand Units	Extra Capacity	Extra Capacity	Equivalent Meters & Services	Bills	Equivalent Connections	Bills	Hydrants
Total Inside City		3,242,350	11,382	22,112	34,669	317,082			
Total Outside City		34,388	206	285	295	1,920			
Grand Total System Units of Service		3,276,738	11,588	22,397	34,964	319,002			
Water Cash Basis Revenue Requirements								
			Max	Max	Customer Units		Direct Fire Protection	
		Base	Day	Hour			Private Fire	Public Fire
REVENUE REQUIREMENT	Total	Demand Units	Extra Capacity	Extra Capacity	Equivalent Meters & Services	Bills	Equivalent Connections	Bills	Hydrants
Total Operation and Maintenance Expenditures	$ 21,493,441	$ 6,178,137	$ 10,806,686	$ 875,157	$ 3,023,462	$ -	$ -	$ -	$ -
Unit Cost	$	$ 2.07	$ 710.28	$ 39.08	$ 86.47	$ -	$ -	$ -	$ -
Total Capital Expenditures	$ 13,000,548	$ 5,802,305	$ 7,208,754	$ 360,200	$ 319,289	$ -	$ -	$ -	$ -
Unit Cost	$	$ 1.80	$ 497.93	$ 16.08	$ 9.13	$ -	$ -	$ -	$ -
Total Non-Rate Revenues	$ (913,314)	$ (288,159)	$ (459,419)	$ (37,209)	$ (128,529)	$ -	$ -	$ -	$ -
Unit Cost	$	$ (0.09)	$ (31.47)	$ (1.66)	$ (3.68)	$ -	$ -	$ -	$ -
Total System Revenue Requirements	$ 34,400,675	$ 12,192,283	$ 17,616,021	$ 1,198,152	$ 3,214,216	$ -	$ -	$ -	$ -
Total System Unit COS	$ -	$ 3.73	$ 1,206.74	$ 53.50	$ 91.93	$ -	$ -	$ -	$ -

For example, total base demand units are 3.2 Million CCF. This means that the O&M, Capital and Non-Rate Revenue Requirements cost $2.07, $1.80 and $(.09) per unit of base water demand. The total unit cost to serve base water demand is $3.78/CCF. The calculation is repeated for each cost component to determine the overall unit cost to serve base demand, extra capacity demand (max day and hour) and provide customer service.

4.2.9 Revenue Requirements by Customer Class

The customer class revenue requirements are the basis for establishing alternative rates by customer class. The City's existing rate structure does not include distinct rates by customer class. At this time the City will not be implementing any rate structure changes. However, the distinct class revenue requirements are shown in Table 36 below and are the basis for the alternative rates by customer class presented as Appendix A.

TABLE 36: WATER REVENUE REQUIREMENTS BY CUSTOMER CLASS

Water Units of Service CUSTOMER CLASS		Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Customer Units Equivalent Meters & Services	Bills	Direct Fire Protection Private Fire Equivalent Fire Connections	Fire Bills	Public Fire Hydrants
Total System Revenue Requirements	$34,400,875	$12,302,286	$17,615,021	$1,198,152	$ 3214,216	$	$	$	$
Total System Unit COS		$ 378	$ 1,206 74	$ 53 45	$ 91 93	$ -	$ -	$ -	$ -
Units of Service									
Total Inside City Residential		1745,505	7,201	11,400	25,021	301,317	-	-	-
Total Inside City Commercial/Industrial		1,484,289	5,866	10,366	8,909	16,210			
Total Inside City Lawn		12,886	245	266	108	566	-	-	-
Total Inside City		3242,360	14,382	22,112	34,039	317,002	-	-	-
Total Outside City Residential		8,112	44	63	129	1,503	-	-	-
Total Outside City Commercial/Industrial		28,206	161	222	166	417	-	-	-
Total Outside City Lawn									
Total Outside City		34,379	206	286	295	1,900	-	-	-
Total System Units of Service		3276,738	14,588	22,397	34,334	319,002			
Allocated Cost of Service									
Total Inside City Residential COS	$ 18,346,872	$ 6,590,778	$ 8,785,440	$ 613,089	$ 2,955,395	$ -	$ -	$ -	$ -
Total Inside City Commercial/Industrial COS	$ 15,203,704	$ 5,604,100	$ 8,204,911	$ 555,005	$ 819,020	$ -	$ -	$ -	$ -
Total Inside City Lawn COS	$ 370,545	$ 97,621	$ 235,186	$ 14,256	$ 12,714	$	$	$	$
Total Inside City COS	$ 33,980,022	$ 12,242,479	$ 17,397,536	$ 1,182,900	$ 3,187,107	$ -	$ -	$ -	$ -
Total Outside City Residential COS	$ 99,453	$ 30,830	$ 63,642	$ 3,889	$ 11,823	$	$	$	
Total Outside City Commercial/Industrial COS	$ 321,169	$ 99,177	$ 194,843	$ 11,863	$ 15,286	$ -	$ -	$ -	$ -
Total Outside City Lawn COS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Outside City COS	$ 420,653	$ 129,807	$ 258,486	$ 15,752	$ 27,109	$	$	$	
Total System Cost of Service	$ 34,400,675	$ 12,372,286	$ 17,615,021	$ 1,198,152	$ 3214,216	$ -	$ -	$ -	$ -
Check on Total System COS (Should be $0)	$ -								

As Table 36 indicates, the revenue requirement for each customer class is the total unit cost of service determined previously, multiplied by the units of service for each customer class. The total allocation is based on each customer class's contribution to the water utility's overall operating and capital costs, as represented by their units of service.

4.3 WATER RATE DESIGN

As mentioned previously, the water rates have been calculated under the City's existing rate structure. The rate calculation under existing rates will be presented here, with the alternative rates by customer class presented as Appendix A for informational purposes.

4.3.1 Volumetric Rate Calculations

As mentioned above, the City did not indicate a desire to significantly modify its water rate structure at this time. Therefore RFC maintained various components of the existing water volumetric rates including:

- The existing inside/outside city differential (i.e. outside=150% of inside)
- The existing steepness or difference between the highest, middle and lowest block rates
- The existing structure which charges the same volumetric rates for all customer classes
- The existing shift of some volumetric costs to the fixed service charge (i.e. a readiness to serve adjustment)

The calculation of the water volumetric rates involves the following steps

- Determine total composite volumetric revenue requirement:

    - Adjust the test-year volumetric revenue requirement (i.e. Base, Max Day and Max Hour costs) by the readiness to serve amount
    - Allocate the adjusted volumetric revenue requirement to the three consumption blocks
    - Add the block allocation for inside and outside city customers to determine a composite volumetric revenue requirement for all customer classes
- Determine the composite water volumetric units:
    - Multiply the consumption, by block, for inside and outside city customers, by their respective differentials (Outside=150% of Inside).
    - Add those units together.
- Calculate Inside and Outside City Volumetric Rates:
    - Determine a composite rate, for each block, for all customer classes:
        - Multiply the composite consumption for each block by the proposed steepness for that block and sum the result
        - For the lowest block divide the total composite revenue requirement by the total determined above.
        - For Blocks 2 and 3 multiply the Block 1 rate by the proposed steepness for Blocks 2 and 3.
    - Multiply the composite rates, by block determined above, by the outside and inside city differentials to determine the block rates for inside and outside city customers.

A summary of the water volumetric rate calculations are indicated in Table 37 below.

TABLE 37: WATER VOLUMETRIC RATE CALCULATIONS

	Total Cost Components by CC			% Allocation of Costs to Blocks			Allocation of Cost Components to Blocks			Test Year	I/O Differential			Block Rate Calculations				
	Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Consumption By Block CCF	Test Year Differential Times Inside City	Test Year Adjusted Consumption CCF	Test Year Composite Consumption CCF	Test Year Proposed Steepness	Existing Rates	Test Year FY 2015 Proposed Block Rates	Difference $	Difference %
EXISTING RATE DESIGN																		
Total Inside City COS	$ 12,212,479	$ 17,367,556	$ 1,132,900															
RCS Adjustment	$ (6,305,322)	$ -	$ -															
Adjusted Inside City COS	$ 5,887,157	$ 17,367,556	$ 1,132,900															
Total Inside City All Classes																		
Inside City Block 1				100%	85%	90%	$ 5,887,157	$ 14,762,05	$ 991,410	1,743,119	1.000	1,743,119	1,699,910	1.30	$ 7.52	$ 7.92	$ 0.40	5%
Inside City Block 2					15%	5%	$ -	$ 2,605,00	$ 99,145	956,438	1.000	956,438	972,173	1.25	$ 7.31	$ 7.62	$ 0.31	4%
Inside City Block 3				0%	0%	5%	$ -	$ -	$ 532,305	542,809	1.000	542,809	562,865	1.00	$ 5.73	$ 6.03	$ 0.30	5%
				100%	100%	100%	$ 5,887,157	$ 17,367,596	$ 1,182,900	3,242,360		3,242,360	3,299,988					
Total Outside City COS	$ 139,805	$ 218,455	$ 15,252															
RCS Adjustment	$ (54,140)	$ -	$ -															
Adjusted Ouside City COS	$ 85,665	$ 218,455	$ 15,252															
Total Outside City All Classes																		
Outside City Block 1				100%	85%	90%	$ 75,664	$ 211,212	$ 7,626	10,527	1.500	15,791		1.30	$ 11.25	$ 11.88	$ 0.62	6%
Outside City Block 2					15%	5%	$ -	$ 37,273	$ 763	10,490	1.500	15,735		1.25	$ 10.77	$ 11.42	$ 0.66	6%
Outside City Block 3				0%	0%	5%	$ -	$ -	$ 6,863	13,361	1.500	20,042		1.00	$ 8.68	$ 9.14	$ 0.46	5%
				100%	100%	100%	$ 75,664	$ 248,485	$ 15,252	34,379		51,568						
Total System																		

4.3.2 Fixed Charge Calculations

As noted above, the City did not express a desire to change rate structures at this time. Consequently, the following aspects of the existing rate structure have been maintained including:

- The existing inside/outside city differential (i.e. outside=150% of inside)
- The existing shift of some volumetric costs to the fixed service charge (i.e. a readiness to serve adjustment)
- The flow equivalencies for the various meter sizes

The calculation of the water fixed charges involves the following steps

- Determine total composite fixed charge revenue requirement by summing the fixed charge revenue requirements (i.e. those allocated to the customer service related cost components) and the readiness to serve revenue requirement
- Determine the composite fixed charge water units:
    - Multiply the number of inside and outside city equivalent accounts by the existing I/O differential (Outside=150% of Inside)
    - Add those units together to determine the composite number of equivalent customer accounts
- Calculate Inside and Outside City Volumetric Rates:
    - Determine an annual composite rate for all customer classes by dividing the total composite revenue requirement determined above, by the total composite water equivalent accounts
    - Determine a monthly rate for the 5/8" equivalent account by dividing the annual rate by 12.
    - Multiply the composite fixed charges by the Inside and Outside City differentials (100% for Inside City and 150% for Outside City) to determine the monthly fixed charge per 5/8" equivalent account for inside and outside city customer classes.
    - Multiply the monthly fixed charge for a 5/8" equivalent account by the meter equivalencies for each meter size to determine the monthly fixed charge for the remaining meter sizes.

The fixed charge calculations are shown in Table 38 on the following page.

TABLE 38: WATER FIXED CHARGE CALCULATIONS

CHARGE	Total Revenue Requirements By Charge	Composite Revenue Requirements	Equivalent Accounts	Test Year Differential ___Times Inside City	Test Year Adjusted Equivalent Accounts	Test Year Composite Equivalent Accounts	Monthly Fixed Charge Per 5/8" Equivalent
Tab: Inside City Residential	$ 1,089,624	$ 1,084,955	25,621	1.00	25,621	25,814	$ 2.29
Tab: Inside City Commercial/Industrial	$ 2,462,905	$ 2,586,722	9,045	1.00	9,045	9,297	$ 22.76
	$ 3,552,529	$ 3,671,677	34,666		34,666	35,111	
Tab: Outside City Residential	$ 35,435		125	1.50	193		$ 34.36
Tab: Outside City Commercial/Industrial	$ 5,817		18	1.50	27		$ 34.13
	41,252		29		42		

CUSTOMER CLASS	Inside City Meter Equivalency	Outside Meter Equivalency	Proposed Fixed Charge INSIDE CITY	Existing Fixed Charge INSIDE CITY	Difference	Proposed Fixed Charge OUTSIDE CITY	Existing Fixed Charge OUTSIDE CITY	Difference
Residential Customers								
5/8"	1.00	0.00	$ 22.00	$ 21.76	5%	$ 34.17	$ 32.48	5%
3/4"	1.50	1.50	$ 44.00	$ 41.85	5%	$ 66.95	$ 63.71	5%
1"	2.50	2.50	$ 55.15	$ 52.52	5%	$ 87.08	$ 82.79	5%
1-1/2"	2.50	2.50	$ 55.15	$ 52.52	5%	$ 87.08	$ 82.79	5%
2"	2.50	2.50	$ 55.15	$ 52.52	5%	$ 87.08	$ 82.79	5%
Commercial/Industrial Customers								
5/8"	2.45	2.45	$ 54.05	$ 51.48	4%	$ 83.14	$ 81.14	4%
3/4"	2.81	2.81	$ 64.02	$ 61.26	4%	$ 95.84	$ 91.72	4%
1"	3.45	3.45	$ 78.46	$ 75.10	4%	$ 117.14	$ 112.37	4%
1-1/2"	4.05	4.05	$ 92.80	$ 88.78	4%	$ 138.06	$ 132.19	4%
2"	5.92	5.92	$ 134.40	$ 128.62	4%	$ 201.26	$ 192.69	4%
3"	10.86	10.73	$ 245.83	$ 235.48	4%	$ 368.65	$ 352.97	4%
4"	24.04	24.04	$ 547.05	$ 523.96	4%	$ 820.01	$ 785.07	4%
6"	47.27	47.27	$ 1,075.75	$ 1,029.63	4%	$ 1,613.04	$ 1,544.37	4%
8"	83.56	83.56	$ 1,900.00	$ 1,819.05	4%	$ 2,850.24	$ 2,728.47	4%
10"	94.69	95.13	$ 2,155.48	$ 2,063.49	4%	$ 3,233.00	$ 3,095.48	4%
12"	114.49	114.48	$ 2,605.31	$ 2,493.98	4%	$ 3,907.77	$ 3,741.27	4%
14"	147.41	147.41	$ 3,354.24	$ 3,211.43	4%	$ 5,031.51	$ 4,817.47	4%
20"	193.89	193.27	$ 4,395.95	$ 4,208.18	4%	$ 6,593.97	$ 6,312.32	4%

4.3.3 Summary of Existing and Forecast Water Rates

Based on the calculations from the previous two sections, the existing and proposed rates for the forecast period are shown on Tables 39 and 40 on the following two pages. Note that while the test year rates have been calculated within the cost of service study, the rates for FY 2016 and beyond are based on the overall rate revenue increase from the water utility financial plan.

TABLE 39: SUMMARY OF EXISTING AND FORECAST VOLUMETRIC WATER RATES

Water Volumetric Rates

CUSTOMER CLASS	CONSUMPTION BLOCK	UNITS	FY 2014 Existing Block Rates	Test Year FY 2015 Proposed Block Rates	Forecast FY 2016 Proposed Block Rates	Forecast FY 2017 Proposed Block Rates	Forecast FY 2018 Proposed Block Rates	Forecast FY 2019 Proposed Block Rates	Forecast FY 2020 Proposed Block Rates	Forecast FY 2021 Proposed Block Rates	Forecast FY 2022 Proposed Block Rates	Forecast FY 2023 Proposed Block Rates	Forecast FY 2024 Proposed Block Rates	Forecast FY 2025 Proposed Block Rates
Total Inside City All Classes														
Inside City Block 1	0-35 CCF	($/CCF)	$ 7.52	$ 7.92	$ 8.32	$ 8.69	$ 8.95	$ 9.22	$ 9.45	$ 9.64	$ 9.83	$ 10.03	$ 10.23	$ 10.44
Inside City Block 2	35-2000 CCF	($/CCF)	$ 7.31	$ 7.62	$ 8.00	$ 8.36	$ 8.61	$ 8.87	$ 9.09	$ 9.28	$ 9.46	$ 9.64	$ 9.84	$ 10.09
Inside City Block 3	above 2000 CCF	($/CCF)	$ 5.79	$ 6.09	$ 6.40	$ 6.68	$ 6.89	$ 7.09	$ 7.27	$ 7.42	$ 7.56	$ 7.72	$ 7.87	$ 8.09
Total Outside City All Classes														
Outside City Block 1	0-35 CCF	($/CCF)	$ 11.26	$ 11.88	$ 12.48	$ 13.04	$ 13.43	$ 13.83	$ 14.18	$ 14.46	$ 14.75	$ 15.04	$ 15.35	$ 15.65
Outside City Block 2	35-2000 CCF	($/CCF)	$ 10.97	$ 11.42	$ 12.00	$ 12.54	$ 12.91	$ 13.30	$ 13.63	$ 13.90	$ 14.10	$ 14.47	$ 14.76	$ 15.05
Outside City Block 3	above 2000 CCF	($/CCF)	$ 8.68	$ 9.14	$ 9.60	$ 10.03	$ 10.33	$ 10.64	$ 10.91	$ 11.12	$ 11.35	$ 11.57	$ 11.80	$ 12.04

TABLE 40: SUMMARY OF EXISTING AND FORECAST WATER FIXED CHARGES

Water Fixed Charges CUSTOMER CLASS	FY 2014 Existing Fixed Charge	Test Year FY 2015 Proposed Fixed Charge	Forecast FY 2016 Proposed Fixed Charge	Forecast FY 2017 Proposed Fixed Charge	Forecast FY 2018 Proposed Fixed Charge	Forecast FY 2019 Proposed Fixed Charge	Forecast FY 2020 Proposed Fixed Charge	Forecast FY 2021 Proposed Fixed Charge	Forecast FY 2022 Proposed Fixed Charge	Forecast FY 2023 Proposed Fixed Charge	Forecast FY 2024 Proposed Fixed Charge	Forecast FY 2025 Proposed Fixed Charge
Inside City Residential Customers												
5/8"	$ 21.78	$ 22.00	$ 24.06	$ 25.19	$ 25.80	$ 26.85	$ 27.38	$ 27.88	$ 28.43	$ 29.00	$ 29.58	$ 30.17
3/4"	$ 41.86	$ 44.00	$ 45.23	$ 48.31	$ 49.76	$ 51.25	$ 52.53	$ 53.59	$ 54.65	$ 55.75	$ 56.87	$ 58.00
1"	$ 65.28	$ 68.16	$ 61.06	$ 63.80	$ 65.72	$ 67.69	$ 69.38	$ 70.77	$ 72.18	$ 73.63	$ 75.10	$ 76.60
1-1/2"	$ 65.28	$ 68.15	$ 61.06	$ 63.80	$ 65.72	$ 67.69	$ 69.38	$ 70.77	$ 72.18	$ 73.63	$ 75.10	$ 76.60
2"	$ 65.28	$ 68.15	$ 61.06	$ 63.80	$ 65.72	$ 67.69	$ 69.38	$ 70.77	$ 72.18	$ 73.63	$ 75.10	$ 76.60
Inside City Commercial/Industrial Customers												
5/8"	$ 53.39	$ 55.79	$ 58.88	$ 61.21	$ 63.05	$ 64.94	$ 66.86	$ 67.90	$ 69.25	$ 70.64	$ 72.05	$ 73.49
3/4"	$ 61.26	$ 64.02	$ 67.22	$ 70.25	$ 72.36	$ 74.52	$ 76.38	$ 77.91	$ 79.47	$ 81.06	$ 82.68	$ 84.34
1"	$ 75.10	$ 78.46	$ 82.41	$ 86.11	$ 88.70	$ 91.36	$ 93.64	$ 95.52	$ 97.43	$ 99.37	$ 101.35	$ 103.38
1-1/2"	$ 107.76	$ 112.60	$ 118.23	$ 123.55	$ 127.26	$ 131.08	$ 134.36	$ 137.04	$ 139.79	$ 142.58	$ 145.43	$ 148.34
2"	$ 150.02	$ 157.40	$ 165.27	$ 172.71	$ 177.89	$ 183.22	$ 187.81	$ 191.56	$ 195.39	$ 199.30	$ 203.29	$ 207.35
3"	$ 297.45	$ 310.89	$ 326.38	$ 341.05	$ 351.29	$ 361.83	$ 370.88	$ 378.29	$ 385.85	$ 393.58	$ 401.45	$ 409.48
4"	$ 523.60	$ 547.05	$ 574.40	$ 600.25	$ 618.26	$ 636.81	$ 652.73	$ 665.78	$ 679.10	$ 692.68	$ 706.53	$ 720.66
6"	$ 1,029.40	$ 1,075.75	$ 1,129.54	$ 1,180.37	$ 1,215.78	$ 1,252.25	$ 1,283.56	$ 1,309.23	$ 1,335.41	$ 1,362.12	$ 1,389.36	$ 1,417.15
8"	$ 1,492.88	$ 1,560.05	$ 1,638.06	$ 1,711.77	$ 1,763.12	$ 1,816.01	$ 1,861.41	$ 1,898.64	$ 1,936.61	$ 1,975.35	$ 2,014.85	$ 2,055.15
10"	$ 2,080.75	$ 2,153.48	$ 2,261.16	$ 2,362.91	$ 2,433.80	$ 2,506.81	$ 2,569.48	$ 2,620.87	$ 2,673.29	$ 2,726.75	$ 2,781.29	$ 2,836.91
12"	$ 2,493.12	$ 2,605.31	$ 2,735.57	$ 2,858.67	$ 2,944.43	$ 3,032.77	$ 3,108.58	$ 3,170.76	$ 3,234.17	$ 3,298.86	$ 3,364.83	$ 3,432.13
16"	$ 3,102.64	$ 3,242.25	$ 3,404.36	$ 3,557.55	$ 3,664.28	$ 3,774.21	$ 3,868.57	$ 3,945.94	$ 4,024.85	$ 4,105.35	$ 4,187.45	$ 4,271.21
20"	$ 3,351.18	$ 3,501.93	$ 3,677.08	$ 3,842.54	$ 3,957.82	$ 4,076.55	$ 4,178.47	$ 4,262.04	$ 4,347.28	$ 4,434.23	$ 4,522.91	$ 4,613.37
Outside City Residential Customers												
5/8"	$ 32.48	$ 34.17	$ 35.87	$ 37.40	$ 38.51	$ 39.77	$ 40.77	$ 41.58	$ 42.41	$ 43.26	$ 44.13	$ 45.01
3/4"	$ 62.71	$ 65.95	$ 69.25	$ 72.37	$ 74.54	$ 76.78	$ 78.68	$ 80.27	$ 81.87	$ 83.51	$ 85.18	$ 86.89
1"	$ 82.79	$ 87.08	$ 91.43	$ 95.55	$ 98.42	$ 101.37	$ 103.90	$ 105.98	$ 108.10	$ 110.26	$ 112.47	$ 114.72
1-1/2"	$ 82.79	$ 87.08	$ 91.43	$ 95.55	$ 98.42	$ 101.37	$ 103.90	$ 105.98	$ 108.10	$ 110.26	$ 112.47	$ 114.72
2"	$ 82.79	$ 87.08	$ 91.43	$ 95.55	$ 98.42	$ 101.37	$ 103.90	$ 105.98	$ 108.10	$ 110.26	$ 112.47	$ 114.72
Outside City Commercial/Industrial Customers												
5/8"	$ 83.19	$ 88.74	$ 87.90	$ 91.88	$ 94.64	$ 97.48	$ 99.92	$ 101.91	$ 103.95	$ 106.03	$ 108.15	$ 110.32
3/4"	$ 91.72	$ 95.04	$ 100.60	$ 105.15	$ 108.30	$ 111.57	$ 114.36	$ 116.64	$ 118.97	$ 121.35	$ 123.78	$ 126.26
1"	$ 107.67	$ 107.74	$ 123.61	$ 129.18	$ 133.07	$ 137.06	$ 140.49	$ 143.31	$ 146.18	$ 149.09	$ 152.07	$ 155.11
1-1/2"	$ 161.79	$ 169.06	$ 177.52	$ 185.61	$ 191.07	$ 196.80	$ 201.72	$ 205.76	$ 209.87	$ 214.07	$ 218.35	$ 222.72
2"	$ 220.09	$ 230.26	$ 240.87	$ 229.24	$ 267.01	$ 275.02	$ 281.90	$ 287.54	$ 293.29	$ 299.15	$ 305.14	$ 311.24
3"	$ 448.47	$ 468.85	$ 490.06	$ 514.28	$ 529.65	$ 545.54	$ 559.18	$ 570.36	$ 581.77	$ 593.41	$ 605.28	$ 617.38
4"	$ 785.37	$ 820.71	$ 861.74	$ 900.52	$ 927.53	$ 955.35	$ 979.24	$ 998.83	$ 1,018.81	$ 1,039.18	$ 1,059.97	$ 1,081.17
6"	$ 1,543.07	$ 1,613.34	$ 1,694.00	$ 1,770.23	$ 1,823.34	$ 1,878.04	$ 1,924.98	$ 1,963.48	$ 2,002.76	$ 2,042.82	$ 2,083.67	$ 2,125.35
8"	$ 2,239.47	$ 2,340.24	$ 2,457.26	$ 2,567.89	$ 2,644.87	$ 2,724.21	$ 2,792.32	$ 2,848.16	$ 2,905.13	$ 2,963.23	$ 3,022.50	$ 3,082.95
10"	$ 3,107.48	$ 3,247.30	$ 3,409.67	$ 3,563.10	$ 3,670.00	$ 3,780.10	$ 3,874.60	$ 3,952.09	$ 4,031.13	$ 4,111.76	$ 4,193.99	$ 4,277.87
12"	$ 3,739.51	$ 3,907.77	$ 4,103.16	$ 4,287.80	$ 4,416.44	$ 4,548.93	$ 4,662.66	$ 4,755.91	$ 4,851.03	$ 4,948.05	$ 5,047.01	$ 5,147.95
16"	$ 4,653.87	$ 4,863.26	$ 5,105.44	$ 5,335.29	$ 5,495.32	$ 5,661.21	$ 5,802.74	$ 5,918.79	$ 6,037.17	$ 6,157.91	$ 6,281.07	$ 6,406.69
20"	$ 5,463.82	$ 5,709.67	$ 5,995.16	$ 6,264.94	$ 6,452.89	$ 6,646.48	$ 6,812.64	$ 6,948.89	$ 7,087.87	$ 7,229.63	$ 7,374.22	$ 7,521.70

4.3.4 Projected Residential Water Bills

Table 41 below indicates projected water bills for Residential Inside City customers with a 5/8" meter. Also included are estimates of the bills, which residential customer may have seen, had the City continued to purchase water from DWSD. For example, had the City continued to purchase water from DWSD, a typical Flint customer using 5 CCF per month would have an estimated water bill in FY 2015 of $67.38 Given the shift to KWA, that same customer would see a bill of $62.51, a savings of $4.87 per month, or $58.44 per year.

TABLE 41: PROJECTED RESIDENTIAL WATER BILLS

ESTIMATED MONTHLY SAVINGS (KWA Ver. Now)	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Monthly Usage (CCF)												
1	$ -	$ (5.42)	$ (5.70)	$ (5.98)	$ (6.28)	$ (6.59)	$ (6.91)	$ (7.25)	$ (7.61)	$ (7.99)	$ (8.39)	$ (8.81)
2	$ -	$ (5.04)	$ (5.29)	$ (5.56)	$ (5.84)	$ (6.13)	$ (6.44)	$ (6.76)	$ (7.10)	$ (7.45)	$ (7.82)	$ (8.21)
3	$ -	$ (4.66)	$ (4.91)	$ (5.16)	$ (5.42)	$ (5.69)	$ (5.98)	$ (6.28)	$ (6.59)	$ (6.92)	$ (7.27)	$ (7.63)
4	$ -	$ (4.28)	$ (4.49)	$ (4.72)	$ (4.96)	$ (5.21)	$ (5.47)	$ (5.75)	$ (6.04)	$ (6.34)	$ (6.66)	$ (6.99)
5	$ -	$ (3.90)	$ (4.09)	$ (4.29)	$ (4.51)	$ (4.73)	$ (4.97)	$ (5.22)	$ (5.48)	$ (5.76)	$ (6.05)	$ (6.35)
6	$ -	$ (3.52)	$ (3.69)	$ (3.87)	$ (4.06)	$ (4.26)	$ (4.48)	$ (4.70)	$ (4.93)	$ (5.18)	$ (5.43)	$ (5.71)
7	$ -	$ (3.14)	$ (3.29)	$ (3.45)	$ (3.62)	$ (3.80)	$ (3.99)	$ (4.19)	$ (4.39)	$ (4.61)	$ (4.84)	$ (5.07)
8	$ -	$ (2.76)	$ (2.89)	$ (3.03)	$ (3.18)	$ (3.34)	$ (3.50)	$ (3.67)	$ (3.86)	$ (4.05)	$ (4.25)	$ (4.46)
9	$ -	$ (2.38)	$ (2.49)	$ (2.61)	$ (2.74)	$ (2.87)	$ (3.01)	$ (3.16)	$ (3.31)	$ (3.47)	$ (3.64)	$ (3.82)
10	$ -	$ (1.99)	$ (2.09)	$ (2.19)	$ (2.30)	$ (2.41)	$ (2.53)	$ (2.65)	$ (2.78)	$ (2.92)	$ (3.06)	$ (3.21)

AVERAGE CUSTOMER (KWA Version)	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Monthly Usage (CCF)												
1	$29.29	$ 30.83	$ 32.31	$ 33.92	$ 31.84	$ 35.83	$ 36.78	$ 37.52	$ 38.27	$ 39.03	$ 39.81	$ 40.61
2	$36.61	$ 36.75	$ 40.68	$ 42.51	$ 43.79	$ 45.10	$ 46.23	$ 47.16	$ 48.10	$ 49.06	$ 50.04	$ 51.04
3	$44.23	$ 46.67	$ 49.00	$ 51.21	$ 52.74	$ 54.32	$ 55.68	$ 56.80	$ 57.93	$ 59.09	$ 30.27	$ 61.46
4	$51.85	$ 54.59	$ 57.32	$ 59.30	$ 61.69	$ 63.55	$ 65.13	$ 66.44	$ 67.77	$ 69.12	$ 70.50	$ 71.91
5	$59.37	$ 62.51	$ 65.64	$ 68.39	$ 70.65	$ 72.77	$ 74.59	$ 76.08	$ 77.60	$ 79.15	$ 30.73	$ 82.35
6	$66.88	$ 70.43	$ 73.96	$ 77.28	$ 79.60	$ 81.99	$ 84.04	$ 85.72	$ 87.43	$ 89.18	$ 90.96	$ 92.78
7	$74.40	$ 78.36	$ 82.28	$ 85.97	$ 88.55	$ 91.21	$ 93.49	$ 95.36	$ 97.27	$ 99.21	$ 101.21	$ 103.22
8	$81.92	$ 86.27	$ 90.60	$ 94.66	$ 97.50	$ 100.43	$ 102.94	$ 105.00	$ 107.10	$ 109.24	$ 111.43	$ 113.65
9	$89.44	$ 94.20	$ 98.93	$ 103.36	$ 106.46	$ 109.65	$ 112.39	$ 114.64	$ 116.93	$ 119.27	$ 121.65	$ 124.08
10	$96.96	$ 102.12	$ 107.22	$ 112.76	$ 115.41	$ 118.87	$ 121.84	$ 124.28	$ 126.77	$ 129.31	$ 131.89	$ 134.52

AVERAGE CUSTOMER (DWSD Version)	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Monthly Usage (CCF)												
1	$29.29	$ 33.25	$ 37.74	$ 39.52	$ 40.81	$ 42.14	$ 43.09	$ 44.17	$ 45.27	$ 46.40	$ 47.56	$ 48.51
2	$36.61	$ 41.78	$ 47.42	$ 49.79	$ 51.29	$ 52.83	$ 54.15	$ 55.50	$ 56.89	$ 58.31	$ 59.77	$ 60.96
3	$44.23	$ 50.31	$ 57.11	$ 59.96	$ 61.76	$ 63.61	$ 65.20	$ 66.83	$ 68.51	$ 70.22	$ 71.97	$ 73.41
4	$51.85	$ 58.86	$ 66.79	$ 70.13	$ 72.24	$ 74.40	$ 76.26	$ 78.17	$ 80.12	$ 82.13	$ 84.13	$ 85.86
5	$59.37	$ 67.38	$ 76.48	$ 80.30	$ 82.71	$ 85.19	$ 87.32	$ 89.50	$ 91.74	$ 94.03	$ 96.39	$ 98.31
6	$66.88	$ 75.91	$ 86.16	$ 90.47	$ 93.18	$ 95.93	$ 98.38	$ 100.84	$ 103.36	$ 105.94	$ 108.59	$ 110.76
7	$74.40	$ 84.45	$ 95.85	$ 100.64	$ 103.66	$ 106.77	$ 109.44	$ 112.17	$ 114.98	$ 117.85	$ 120.80	$ 123.21
8	$81.92	$ 92.98	$ 105.53	$ 110.81	$ 114.13	$ 117.55	$ 120.50	$ 123.51	$ 126.60	$ 129.76	$ 133.00	$ 135.66
9	$89.44	$ 101.51	$ 115.22	$ 120.98	$ 124.61	$ 128.34	$ 131.55	$ 134.84	$ 138.21	$ 141.67	$ 145.21	$ 148.11
10	$96.96	$ 110.05	$ 124.90	$ 131.15	$ 135.08	$ 139.13	$ 142.61	$ 146.18	$ 149.83	$ 153.58	$ 157.42	$ 160.56

5. WASTEWATER UTILITY COST OF SERVICE STUDY

Following the development of the wastewater utility financial plans the next step is to determine the level of rate revenues required to adequately recover the cost of providing wastewater service. This is typically performed for a test year, which—as mentioned previously—is the year ending June 30, 2014 (FY 2015).

5.1 WASTEWATER REVENUE REQUIREMENT FROM RATES

Table 42 below indicates the level of wastewater utility expenditures which must be recovered from rates in the FY 2015 test year. As the table indicates, the total test year revenue requirement is approximately $29 Million.

TABLE 42: WASTEWATER REVENUE REQUIREMENTS

OPERATION AND MAINTENANCE EXPENDITURES												
Revenue/Expense Item	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Dept 500-101-Utilities - Sewer Administration	$ 7,442,430	$ 7,650,942	$ 7,650,942	$ 7,650,942	$ 7,971,570	$ 8,095,210	$ 8,225,940	$ 8,550,051	$ 8,897,000	$ 9,000,091	$ 9,216,100	$ 9,508,200
Total Dept 540-100-Water Service Center Management	$ 2,713,445	$ 839,476	$ 839,476	$ 839,476	$ 866,367	$ 894,148	$ 922,840	$ 952,502	$ 983,141	$ 1,014,803	$ 1,047,513	$ 1,081,318
Total Dept 540-300-WSC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 540-207-Misc Meter Reading - Sewer	$ 700,010	$ 700,419	$ 700,419	$ 700,419	$ 702,919	$ 700,270	$ 814,510	$ 841,000	$ 839,700	$ 880,000	$ 880,970	$ 900,140
Total Dept 540-208-Misc Sewer Maint/Construction	$ 2,703,188	$ 2,797,696	$ 2,797,696	$ 2,797,696	$ 2,886,711	$ 2,987,382	$ 3,102,837	$ 3,212,232	$ 3,325,725	$ 3,443,478	$ 3,566,664	$ 3,692,459
Total Dept 580-100-Npc Operations	$ 5,716,112	$ 5,516,186	$ 5,183,386	$ 5,183,386	$ 5,367,112	$ 5,457,629	$ 5,755,178	$ 5,980,038	$ 6,172,480	$ 6,392,768	$ 6,521,295	$ 6,868,239
Total Dept 520-200-Npc-Third Ave Pump Station	$ 989,910	$ 705,202	$ 705,202	$ 705,202	$ 761,001	$ 709,006	$ 817,004	$ 847,425	$ 870,119	$ 903,900	$ 942,960	$ 971,256
Total Dept 580-214-Npc-Maintenance Expense	$ 2,817,389	$ 2,912,411	$ 2,912,411	$ 2,912,411	$ 3,018,117	$ 3,119,314	$ 3,212,896	$ 3,330,211	$ 3,431,256	$ 3,546,163	$ 3,656,132	$ 3,766,300
Total Dept 580-300-NPC - Capital Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 520-000-Non dep_Exp-Sewer Portion	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 965-101-Transfers out to Und 101	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000	$ 1,850,000
Total Operation and Maintenance Expenditures	$ 24,233,697	$ 23,053,932	$ 22,720,532	$ 22,720,532	$ 23,394,671	$ 24,013,503	$ 24,014,101	$ 25,567,110	$ 26,327,401	$ 27,124,116	$ 27,347,561	$ 28,004,000
CAPITAL EXPENDITURES												
Revenue/Expense Item	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Grand Total Existing and Proposed Debt Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wastewater Rate Revenue Financing (Cash)	$ 6,900,000	$ 5,900,000	$ 10,000,000	$ 9,500,000	$ 12,500,000	$ 7,500,000	$ 8,000,000	$ 7,900,000	$ 8,000,000	$ 8,000,000	$ 8,200,000	$ 8,500,000
Add Net Operating Surplus/(Deficit)	$ (2,660,381)	$ 1,464,161	$ (1,161,386)	$ 317,080	$ (1,386,371)	$ 3,806,353	$ 2,147,841	$ 3,624,189	$ 3,082,644	$ 3,089,085	$ 2,382,773	$ 2,481,436
Add Wastewater Transfers in Equipment Replacement Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Expenditures	$ 3,839,619	$ 6,964,161	$ 8,838,614	$ 10,317,080	$ 11,113,629	$ 11,306,353	$ 11,147,841	$ 11,524,189	$ 11,082,644	$ 11,089,085	$ 10,582,773	$ 10,981,436
CROSS REVENUE REQUIREMENT FROM RATES	$ 28,073,316	$ 30,017,923	$ 31,629,196	$ 33,207,602	$ 34,490,300	$ 35,597,532	$ 35,950,941	$ 37,091,262	$ 37,420,125	$ 38,173,170	$ 37,940,734	$ 38,720,436
NON-RATE REVENUES												
Revenue/Expense Item	Budget Year FY 2014	Test Year FY 2015	Forecast FY 2016	Forecast FY 2017	Forecast FY 2018	Forecast FY 2019	Forecast FY 2020	Forecast FY 2021	Forecast FY 2022	Forecast FY 2023	Forecast FY 2024	Forecast FY 2025
Total Non-rate Revenues	$ 395,842	$ 424,670	$ 410,222	$ 423,308	$ 416,336	$ 434,257	$ 405,067	$ 513,187	$ 528,651	$ 543,835	$ 558,860	$ 570,962
NET REVENUE REQUIREMENT FROM RATES	$ 27,677,474	$ 29,593,254	$ 31,219,974	$ 32,784,294	$ 34,081,964	$ 35,163,274	$ 35,545,874	$ 36,578,074	$ 36,891,474	$ 37,629,274	$ 37,381,874	$ 38,149,474

5.2 WASTEWATER REVENUE REQUIREMENTS BY CUSTOMER CLASS

Following the development of the total test year revenue requirement, the proportion of that revenue requirement attributable to each customer class must be determined. This allocation is performed via the multi-step process described below.

5.2.1 O&M Allocation to Function Categories

The first step in determining revenue requirements by customer class is to allocate the test year O&M revenue requirement to functional categories. These categories are functions that the wastewater utility must perform in order to deliver wastewater service to City customers. For the wastewater utility they are: Administrative and General, Customer Service, Collection, Pumping, and Treatment.

The O&M allocations, by department, are shown in Table 43 below:

TABLE 43: WASTEWATER O&M ALLOCATION TO FUNCTIONAL CATEGORIES

DEPARTMENT	Total $ Allocation	Administrative and General	Customer Service	Collection System	Lift Stations and Pumping	Wastewater Treatment
Total Dept 536.101-Utilities - Sewer Administration	$ 7,653,942	$ 7,653,942	$ -	$ -	$ -	$ -
Total Dept 540.100-Water Service Center Management	$ 839,476	$ -	$ 839,476	$ -	$ -	$ -
Total Dept 540.300-WSC - Capital improvements	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 540.207-Wsc-Meter Reading - Sewer	$ 738,419	$ -	$ 738,419	$ -	$ -	$ -
Total Dept 540.208-Wsc-Sewer Maint./Construction	$ 2,797,696	$ -	$ -	$ 2,797,696	$ -	$ -
Total Dept 550.100-Wpc Operations	$ 5,516,166	$ -	$ -	$ -	$ -	$ 5,516,166
Total Dept 550.200-Wpc-Third Ave Pump Station	$ 735,282	$ -	$ -	$ -	$ 735,282	$ -
Total Dept 550.202-Wpc-Maintenance Expense	$ 2,912,411	$ -	$ -	$ -	$ -	$ 2,912,411
Total Dept 550.300-WPC - Capital improvements	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 550.800-Non_dep_Exp-Sewer Portion	$ -	$ -	$ -	$ -	$ -	$ -
Total Dept 966.101-Transfers out to fund 101	$ 1,860,000	$ 1,860,000	$ -	$ -	$ -	$ -
GRAND TOTAL WASTEWATER UTILITY	$ 23,053,392	$ 9,513,942	$ 1,577,894	$ 2,797,696	$ 735,282	$ 8,428,578

5.2.2 O&M Allocation to Cost Components

Once O&M costs have been allocated to functional categories, the total O&M revenue requirement allocated to each functional category must be further allocated based on the operational need which they are designed to fulfill. For this allocation RFC has generally utilized the cost allocation methodology described in the Water Environment Federation's Manual of Practice No. 27, "Financing and Charges for Wastewater Systems."

The costs components utilized in this study are: volume or wastewater utility costs which are incurred on the basis of the quantity of wastewater discharged into the system; strength measures such as Biochemical Oxygen Demand ("BOD"), Total Suspended Solids ("TSS") and Phosphorus; and customer measures such as equivalent meters and monthly bills. A summary of the allocation of the wastewater O&M revenue requirement is included in Table 44 on the following page.

TABLE 44: WASTEWATER O&M ALLOCATION TO COST COMPONENTS

FUNCTIONAL CLASSIFICATION	Total $ Allocation	Volume Allocation	Strength			Customer	
			Allocation To BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
Administrative and General	$ 9,613,942	$ 2,482,564	$ 1,974,206	$ 1,974,206	$ 1,974,206	$ 1,108,760	$ -
Customer Service	$ 1,577,894	$ -	$ -	$ -	$ -	$ 1,577,894	$ -
Collection System	$ 2,797,696	$ 2,797,696	$ -	$ -	$ -	$ -	$ -
Lift Stations and Pumping	$ 735,282	$ 735,282	$ -	$ -	$ -	$ -	$ -
Wastewater Treatment	$ 8,428,578	$ -	$ 2,809,526	$ 2,809,526	$ 2,809,526	$ -	$ -
	$ 23,153,392	$ 6,015,542	$ 4,783,732	$ 4,783,732	$ 4,783,732	$ 2,686,654	$ -

5.2.3 Capital Cost Allocation to Functional Components

Similar to the allocation of the O&M revenue requirement described in the previous section, the capital revenue requirement must be allocated to functional categories. Table 45 below indicates the allocation of capital costs.

TABLE 45: WASTEWATER CAPITAL ALLOCATION TO FUNCTIONAL CATEGORIES

Allocation of Capital Costs to Functional Categories						
	Total	Administrative and General	Customer Service	Collection System	Lift Stations and	Wastewater Treatment
Breakdown of Fixed Assets by Function	**100%**	**0.32%**	**0.00%**	**82.79%**	**4.31%**	**12.58%**
Total Capital Expenditures	**$ 7,230,845**	**$ 22,823.92**	**$ -**	**$ 5,986,709**	**$ 311,745**	**$ 909,567**
$ Allocation of Water Fixed Assets to Functional Categories						
FIXED ASSET CATEGORY	Net Book Value	Administrative and General	Customer Service	Collection System	Lift Stations and	Wastewater Treatment
01Land	$ 38,077	$ 120	$ -	$ 31,526	$ 1,642	$ 4,790
02Construction-in-progress	$ 527,286	$ 1,664	$ -	$ 436,561	$ 22,733	$ 66,327
11Land Improvements	$ 3,480,377	$ 10,986	$ -	$ 2,881,545	$ 150,050	$ 437,796
12Building Improvements	$ 752,952	$ 2,377	$ -	$ 623,399	$ 32,462	$ 94,714
13Sewage disposal plant & equipment	$ 6,581,444	$ -	$ -	$ -	$ -	$ 6,581,444
14Vehicle	$ 456,125	$ -	$ -	$ 456,125	$ -	$ -
15 Sewage Pumping Station	$ 2,255,719	$ -	$ -	$ -	$ 2,255,719	$ -
16Office & Other Equipment	$ 28,892	$ 28,892	$ -	$ -	$ -	$ -
17Sewer SSR	$ 42,862,474	$ -	$ -	$ 42,862,474	$ -	$ -
18Sanitary Sewers (Engg only)	$ 136,257	$ 136,257	$ -	$ -	$ -	$ -
Total Water Fixed assets	$ 57,119,603	$ 180,296	$ -	$ 47,291,630	$ 2,462,606	$ 7,185,071
% Breakdown	100.00%	0.32%	0.00%	82.79%	4.31%	12.58%

As the table above indicates, the basis for the allocation of capital costs was the existing level of wastewater utility investment in fixed assets. The existing net book value of each major asset class was allocated to the functional categories. The total capital revenue requirement, approximately 7 Million in the test year, was then allocated according to the proportion of existing investment in each functional category. For example, a large proportion of investment in wastewater fixed assets relates to the rehabilitation of the City's collection system ("Sewer SSR"). As such, the majority of the capital revenue requirement (82%) has been allocated to the collection system function.

5.2.4 Capital Cost Allocation to Cost Components

As with the allocation of the O&M revenue requirement described above, the functionally allocated capital revenue requirement must also be further allocated according to the operational need that each function is designed to fulfill.

Table 46 below summarizes this allocation.

TABLE 46: WASTEWATER CAPITAL ALLOCATION TO COST COMPONENTS

			Strength			Customer	
FUNCTIONAL CLASSIFICATION	Total $ Allocation	Volume Allocation	Allocation To BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
Administrative and General	22,824	19,944	960	960	960	-	-
Customer Service	-	-	-	-	-	-	-
Collection System	5,986,709	5,986,709	-	-	-	-	-
Lift Stations and Pumping	311,745	311,745	-	-	-	-	-
Wastewater Treatment	909,567	-	303,189	303,189	303,189	-	-
Total Capital Expenditures	7,230,845	6,318,397	304,149	304,149	304,149	-	-

5.2.5 Non-Rate Revenue Allocation to Cost Components

Non-rate revenue must be excluded from the O&M and Capital revenue requirements as these amounts are an offset to the revenue requirement which will be recovered from rates. Consequently, non-rate revenues are allocated to the cost components so that they can be removed from the total revenue requirement. In this case, non-rate revenues were allocated proportionally according to the total O&M revenue requirement allocation and can be seen in Table 47 below.

TABLE 47: WASTEWATER NON-RATE REVENUE ALLOCATION TO COST COMPONENTS

			Strength			Customer	
ACCOUNT CODE DESCRIPTION	Total $ Allocation	Volume Allocation	Allocation To BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
590536.101-456.000 Bus.Licenses & Permits - Utilities	21,872	6,707	4,539	4,539	4,539	2,549	-
590536.101-530.000 Federal Grants	-	-	-	-	-	-	-
590536.101-530.001 State Grants	-	-	-	-	-	-	-
590536.101-654.000 Fines - Turn On Fees - Utilities							
590536.101-657.100 Forfeited Discount - Utilities	360,000	91,329	72,627	72,627	72,627	40,789	-
590536.101-690.000 Self Insurance recoveries	-	-	-	-	-	-	-
590536.101-800.000 Due From Fund Balance	-	-	-	-	-	-	-
590536.101-699.999 Prior Year Revenue	-	-	-	-	-	-	-
590540.100677.000 Reimbursements	-	-	-	-	-	-	-
590540.208636.000 Charges For Services Rendered	-	-	-	-	-	-	-
590540.208636.001 Charges For Service Rendered - Internally							
590540.208677.000 Reimbursements	-	-	-	-	-	-	-
590540.200677.000 Reimbursements -proprietary funds	-	-	-	-	-	-	-
590580.100648.000 Scrap Sales	20,000	5,210	4,150	4,150	4,150	2,331	-
590580.100649.000 Auction Rev- Forfeited & Others	-	-	-	-	-	-	-
590580.100657.000 Fines - Turn On Fees - Utilities	-	-	-	-	-	-	-
590580.100677.000 Reimbursements	-	-	-	-	-	-	-
590580.100699.998 Due From Fund Balance							
590580.200696.000 Discounts Earned	2,000	522	415	415	415	233	-
590580.201-456.000 Bus.Licenses & Permits - Utilities	2,000	522	415	415	415	233	-
590580.202600.000 Due From Fund Balance	-	-	-	-	-	-	-
590580.800664.100 Interest Earned	37,890	7,226	6,746	6,746	6,746	3,227	-
Add Transfers in from General Fund	-	-	-	-	-	-	-
Total Non-Rate Revenues	423,962	110,524	87,802	87,802	87,802	49,362	-

5.2.6 Plant Balance Analysis

Once each component of the revenue requirements has been determined, wastewater strength units, by customer class must be estimated. These are the basis upon which the strength costs, determined in the previous step, are allocated to each customer class.

This allocation is performed via a proportional distribution of each measure of strength to each customer class, based on the contribution of that class to overall billed wastewater volumes. This calculation is shown in Table 48 below.

TABLE 48: WASTEWATER PLANT BALANCE ANALYSIS CALCULATIONS

CUSTOMER CLASS	Test Year Volume (CCF)	Biochemical Oxygen Demand mg/L	Biochemical Oxygen Demand Pounds	Total Suspended Solids mg/L	Total Suspended Solids Pounds	Phosphorous mg/L	Phosphorous Pounds	Test Year Combined Pounds
Treatment Plant Volumes	3,883,016	84.5	1,095,381.27	69.5	1,401,011.30	4.25	96,786.56	3,880,000
less:								
Total Inside City Residential	1,770,077	100	919,000	90	910,477	2	17,177	1,902,094
Total Inside City Commercial/Industrial	1,388,721	100	887,451	93	813,007	2	15,238	1,705,696
Total Outside City Residential	205	100	129	93	120	2	2	251
Total Outside City Commercial/Industrial	7,012	100	4,289	90	4,076	2	70	8,435
Total System Billed Volumes	2,982,604	100	1,871,099	93	1,733,639	2	32,494	3,637,192
Total Infiltration and Inflow	885,412	15	64,272.40	15	64,272.40	15	64,272.40	128,817
Balance	-		(0)		(0)		-	-
Gallons per CCF	7.48							
Milligrams per Pound	453,592							
Liters per Gallon	3.7854							
% Infiltration and Inflow	29%							

As an example, consider Biochemical Oxygen Demand. The proportion of BOD contributed to the wastewater system by each class, is function of the overall volume contributed by that class. Therefore the BOD units are allocated to each customer class based on their proportion of total billed volumes. Inside City Residential customers, for example, are forecasted to contribute 1.5 Million CCF in billed wastewater volumes in the test year, or 53% of total billed volumes. Consequently, they are assigned 53% of total forecast BOD. The same calculations are performed for the remaining strength units, TSS and Phosphorous.

The result is a total level of strength units for each customer class, which is then used to determine unit costs by customer class and allocate the test year revenue requirement.

5.2.7 Calculation of Units of Service

The next step in the cost allocation process is to summarize the units of service, which are used as the basis for the allocation of the total revenue requirement to each of the customer classes. The units pertain to each of the cost components mentioned above (i.e. strength, volume and customer units). In the following step, the units will be used to determine a unit cost for each cost component.

The wastewater units of service are shown in Table 49 below.

TABLE 49: WASTEWATER UNITS OF SERVICE

WASTEWATER UNITS OF SERVICE		Residential		Commercial/Industrial	
	Total System (CCF)	Total Inside City Residential	Total Outside City Residential	Total Inside City Commercial/Industrial	Total Outside City Commercial/Industrial
Volume Units					
% Breakdown		52.9%	0.0%	46.9%	0.2%
Total System Billed Volumes	2,982,604	1,576,666	206	1,398,721	7,012
Total Infiltration and Inflow	686,412	362,852	47	321,900	1,614
Total Volume	3,669,016	1,939,517	253	1,720,620	8,625
Strength Units					
BOD	1,871,059	989,080	129	877,451	4,399
TSS	1,733,639	916,437	120	813,007	4,076
Phosporous	32,494	17,177	2	15,238	76
Total Wastewater Strength (Pounds)	3,637,192	1,922,694	251	1,705,696	8,550
Customer Units					
Meters	33,177	25,436	6	7,699	35
Bills	315,952	301,096	71	14,646	137

As mentioned above the units determined for each customer class are volume (the total forecast wastewater contribution) strength (the proportion of wastewater strength units determined in the plant balance analysis) and customer (equivalent meters and customer bills as in the water cost of service study).

5.2.8 Unit Cost of Service

Following the allocation of the wastewater revenue requirements to each of the cost components and the calculation of the units of service, a unit cost of service for each cost component can be determined. These unit costs are the basis by which the revenue requirements by customer class are determined.

The unit cost of service is the total revenue requirement, as allocated to the cost components, divided by the units of service attributable to each component and is shown in Table 50 on the following page.

TABLE 50: WASTEWATER UNIT COST OF SERVICE

Wastewater Unit Cost of Service

CUSTOMER CLASS	Volume Allocation	Strength			Customer	
		Allocation to BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
Total Inside City Residential	1,090,597	930,080	916,437	17,171	25,436	301,035
Total Outside City Residential	253	29	120	2	6	71
Total Inside City Commercial/Industria	1,730,620	877,451	813,207	15,238	7,689	14,846
Total Outside City Commercial/Industrial	8,625	4,389	4,076	76	35	137
Grand Total System Units of Service	3,689,016	1,871,059	1,733,839	32,491	33,117	316,952

Wastewater Cash Basis Revenue Requirements

REVENUE REQUIREMENT	Total	Volume Allocation	Strength			Customer	
			Allocation to BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
Total Operation and Maintenance Expenditures	$ 23053,382	$ 6,015,942	$ 4,788,132	$ 4,788,132	$ 4788,732	$2,886,664	$ -
Unit Cost		$ 1.64	$ 2.56	$ 2.76	$ 147.22	$ 80.98	$ -
Total Capital Expenditures	$ 7230,845	$ 6,318,387	$ 304,749	$ 304,149	$ 304,149	$ -	$ -
Unit Cost		$ 1.72	$ 0.16	$ 0.18	$ 9.36	$ -	$ -
Total Non-Rate Revenues	$ (423,952)	$ (10,824)	$ (87,892)	$ (87,392)	$ (87,892)	$ (49,952)	$
Unit Cost		$ (0.03)	$ (0.05)	$ (0.05)	$ (2.70)	$ (1.58)	$ -
Total System Revenue Requirements	$ 29860,67	$ 12,223,415	$ 4,998,989	$ 4,998,989	$ 4998,989	$2,657,292	$ -
Total System Unit COS	$ -	$ 3.33	$ 2.67	$ 2.88	$ 153.86	$ 79.19	$ -

For example, the total volume units are 3.6 Million CCF. This means that the O&M, Capital and Non-Rate Revenue Requirements cost $1.64, $1.72 and $(.03) per unit of wastewater volume. The total unit cost associated with wastewater volume is $3.33/CCF. The calculation is repeated for each cost component to determine the overall unit cost associated with wastewater volume, strength (BOD, TSS and Phosphorous) and customer service.

5.2.9 Revenue Requirements by Customer Class

The customer class revenue requirements are the basis for establishing alternative rates by customer class. The City's existing wastewater rate structure does not include distinct rates by customer class. At this time the City does not wish to make major rate structure changes. However, the revenue requirements by customer class are shown in Table 51 on the following page and are the basis for the alternative wastewater rates presented as appendix B to this report.

TABLE 51: WASTEWATER REVENUE REQUIREMENTS BY CUSTOMER CLASS

Wastewater Units of Service			Strength			Customer	
CUSTOMER CLASS		Volume Allocation	Allocation To BOD	Allocation to TSS	Allocation to Phosphorous	Customer Meters	Customer Bills
Total System Revenue Requirements	$ 29,860,674	$ 12,223,415	$ 4,999,989	$ 4,999,989	$ 4,999,989	$2,637,292	$ -
Total System Unit COS		$ 3.33	$ 2.67	$ 2.88	$ 153.87	$ 79.49	$ -
Units of Service							
Total Inside City Residential		1,939,517	989,080	916,437	17,177	25,436	301,096
Total Inside City Commercial/Industrial		1,720,620	877,451	813,007	15,238	7,699	14,646
		3,660,138	1,866,531	1,729,444	32,415	33,136	315,743
Total Outside City Residential		253	129	120	2	6	71
Total Outside City Commercial/Industrial		8,625	4,399	4,076	76	35	137
		8,878	4,528	4,195	79	42	209
Total System Units of Service		3,669,016	1,871,059	1,733,639	32,494	33,177	315,952
Allocated Cost of Service							
Total Inside City Residential COS	$ 16,412,799	$ 6,461,549	$ 2,643,097	$ 2,643,097	$ 2,643,097	$2,021,959	$ -
Total Inside City Commercial/Industrial COS	$ 13,378,697	$ 5,732,268	$ 2,344,793	$ 2,344,793	$ 2,344,793	$ 612,030	$ -
Total Inside City All Classes	$ 29,791,496	$ 12,193,837	$ 4,987,890	$ 4,987,890	$ 4,987,890	$2,633,989	$ -
Total Outside City Residential COS	2,382.16	$ 843	$ 345	$ 345	$ 345	$ 505	$ -
Total Outside City Commercial/Industrial COS	66,796.05	$ 28,735	$ 11,754	$ 11,754	$ 11,754	$ 2,798	$ -
Total Outside City All Classes	$ 69,178	$ 29,578	$ 12,099	$ 12,099	$ 12,099	$ 3,303	$ -
Total System Cost of Service	$ 29,860,674	$ 12,223,415	$ 4,999,989	$ 4,999,989	$ 4,999,989	$2,637,292	$ -
Check on Total System COS (Should be $0)	$ -						

The revenue requirement for each customer class is the total unit cost of service determined previously, multiplied by the units of service for each customer class. The result is a total allocation to each customer class made up of each of the cost components discussed previously. The allocation is based on each customer class's contribution to the wastewater utility's overall operating and capital costs, as represented by their units of service.

5.3 WASTEWATER RATE DESIGN

The wastewater rates have been calculated under the existing rate structure and under a new structure which recognizes the customer classes present in the City's CIS. The rate calculation under existing rates will be presented here, with the alternative rates by customer class presented as an appendix B.

5.3.1 Volumetric Rate Calculations

As mentioned above, the City did not indicate a desire to significantly modify the existing wastewater rate structure. Therefore RFC maintained various components of the existing water volumetric rates including:

- The existing inside/outside city differential (i.e. outside=110% of inside)
- The existing structure which charges the same volumetric rates for all customer classes
- The existing shift of some volumetric costs to the fixed service charge (i.e. a readiness to serve adjustment)

The calculation of the wastewater volumetric rates involves the following steps

- Determine total composite volumetric revenue requirement:
    - Adjust the test-year revenue requirement allocated to the volume cost component by the readiness to serve amount
    - Add the wastewater strength related cost components (BOD, TSS and Phosphorous)
    - Remove Beecher Metro Revenue
    - Add the inside and outside city revenue requirements to determine a composite revenue requirement for all customer classes
- Determine the composite wastewater units:
    - Multiply the units of inside and outside city customers by the existing I/O differential (Outside=110% of Inside)
    - Add those units together.
- Calculate Inside and Outside City Volumetric Rates:
    - Determine a composite rate for all customer classes by dividing the total composite revenue requirement determined above, by the total composite wastewater units
    - Multiply the composite rates by the Inside and Outside City differentials (100% for Inside City and 110% for Outside City) to determine the rates for each customer class.

The above calculations are summarized in Table 52 on the following page.

TABLE 52: WASTEWATER VOLUMETRIC RATE CALCULATIONS

	Revenue Requirements								Test Year Volumes					Test Year Rate Calculation			
	Test Year Volume RR	Test Year Strength RR (BOD)	Test Year Strength RR (TSS)	Test Year Strength RR (Flow	Test Year Total Volumetric RR	Less Dischar Metro Revenue	Adjusted Revenue Requiremen	Composite Revenue Requirement	Test Year Billed Volumes CCF	Test Year Billed Volumes %Breakdown	Test Year Differential Times Inside City	Test Year Adjusted Consumption CCF	Test Year Composite Consumption CCF	Test Year Volumetric Rates $/CCF	Existing Volumetric Rates $/CCF	Difference $	Difference %
EXISTING RATE DESIGN																	
Total Inside City COS	$ 2,193,837	$ 4,987,890	$ 4,987,890	$ 4,987,890	$ -	$ -	$ -	$ -									
RTS Adjustment	$ (1,078,309)	$ -	$ -	$ -	$ -	$ -	$ -	$ -									
Total Inside City All Classes	$ 1,115,528	$ 4,987,890	$ 4,987,890	$ 4,987,890	$ 16,079,199	$ (711,543)	$ 15,367,655	$ 15,417,914	2,982,804	100.00%	1.000	2,983,326	2,983,326	$ 5.17	4.8	$ 0.37	8%
Total Outside City COS	$ 29,578	$ 12,089	$ 12,089	$ 12,089	$ -	$ -	$ -	$ -									
RTS Adjustment	$ (13,890)	$ -	$ -	$ -	$ -	$ -	$ -	$ -									
Total Outside City All Classes	$ 15,688	$ 12,089	$ 12,089	$ 12,089	$ 51,965	$ (1,726)	$ 50,239	$ -			1.000			$ 5.68	5.265	$ 0.41	8%
Total System	$ 1,131,216	$ 4,999,979	$ 4,999,979	$ 4,999,979	$ 16,131,163	$ (713,269)	$ 15,417,914	$ 15,417,914									

5.3.2 Fixed Charge Calculations

As noted above, the City did not express a desire to change rate structures at this time. Consequently, the following aspects of the existing rate structure have been maintained including:

- The existing inside/outside city differential (i.e. outside=120% of inside)
- The existing shift of some volumetric costs to the fixed service charge (i.e. a readiness to serve adjustment)
- The flow equivalencies for the various meter sizes

The calculation of the wastewater fixed charges involves the following steps:

- Determine total composite fixed charge revenue requirement by summing the fixed charge revenue requirements (i.e. those allocated to the customer service related cost components) and the readiness to serve revenue requirement.
- Determine the composite fixed charge wastewater units:
    - Multiply the number of inside and outside city equivalent accounts by the existing I/O differential (Outside=120% of Inside)
    - Add those units together to determine the composite number of equivalent customer accounts
- Calculate Inside and Outside City Volumetric Rates by:
    - Determine an annual composite rate for all customer classes by dividing the total composite revenue requirement determined above, by the total composite wastewater equivalent accounts
    - Determine a monthly rate for the 5/8" equivalent account by dividing the annual rate by 12.
    - Multiply the composite fixed charges by the Inside and Outside City differentials (100% for Inside City and 110% for Outside City) to determine the monthly fixed charge per 5/8" equivalent account for inside and outside city customer classes.
    - Multiply the monthly fixed charge for a 5/8" equivalent account by the meter equivalencies for each meter size to determine the monthly fixed charge for the remaining meter sizes.

The calculations described in the narrative above are summarized in Table 53 on the following page.

TABLE 53: WASTEWATER FIXED CHARGE CALCULATIONS

CUSTOMER CLASS	Readiness to Serve Adjustment: Fixed Charge Revenue Requirement	Readiness to Serve Adjustment: Adjustment	Readiness to Serve Revenue Req.	Base Fixed: FR Allocated on Customer Services	Base Fixed: RR Allocated on Customer Bills
Bld Inside City Residential COS	$ 2,021,969	420.6%	$ 8,504,168	$ 2,021,969	$ -
Bld Outside City Residential COS	$ 995	420.6%	$ 2,120	$ 995	$ -
Bld Inside City Commercial/Industrial COS	$ 612,000	420.6%	$ 2,574,140	$ 612,000	$ -
Bld Outside City Commercial/Industrial COS	$ 2,793	420.6%	$ 11,758	$ 2,793	$ -
Bld Inside City Residential COS Adjustment	$ 2,021,969	$ 8,504,168			
Bld Outside City Residential COS Adjustment	$ 995	$ 2,120			
Bld Inside City Commercial/Industrial COS Adjustment	$ 612,000	$ 2,574,140			
Bld Outside City Commercial/Industrial COS Adjustment	$ 2,793	$ 11,700			

CHARGE	Total Revenue Requirements By Charge	Composite Revenue Requirements	Equivalent Accounts	Ten Year Differential ___ Times Inside City	Test Year Adjusted Equivalent Accounts	Test Year Composite Equivalent Accounts	Monthly Fixed Charge "per 5/8" Equivalent
Bld Inside City Residential	$ 10,525,137	$ 10,528,756	25,406	1.00	25,406	25,444	$ 34.16
Bld Inside City Commercial/Industrial	$ 3,186,170	$ 3,200,736	7,699	1.00	7,699	7,722	$ 34.16
	$ 13,712,298	$ 13,729,491	33,106		33,106	33,166	
Bld Outside City Residential	$ 2,027		6	2	0		$ 41.30
Bld Outside City Commercial/Industrial	$ 14,986		36	2	42		$ 41.30
	17,193		42		90		

CUSTOMER CLASS	Inside City Meter Equivalency	Inside City Meter Equivalency	Proposed Fixed Charge INSIDE CITY	Existing Fixed Charge INSIDE CITY	Difference	Proposed Fixed Charge OUTSIDE CITY	Existing Fixed Charge OUTSIDE CITY	Difference
Residential Customers								
5/8"	.01	1.00	$ 31.48	$ 29.00	8%	$ 44.19	$ 41.00	8%
3/4"	.47	1.46	$ 50.56	$ 46.92	8%	$ 60.35	$ 56.00	8%
1"	2.04	2.00	$ 70.41	$ 65.31	8%	$ 82.36	$ 76.00	8%
1-1/2"	2.04	2.00	$ 70.41	$ 65.31	8%	$ 82.36	$ 76.99	8%
2"	2.04	2.00	$ 70.41	$ 65.31	8%	$ 82.36	$ 76.99	8%
Commercial/Industrial Customers								
5/8"	.62	1.51	$ 55.90	$ 51.89	8%	$ 62.57	$ 58.2	8%
3/4"	2.01	1.92	$ 69.36	$ 64.34	8%	$ 79.46	$ 73.62	8%
1"	2.64	2.65	$ 91.20	$ 84.68	8%	$ 105.56	$ 98.06	8%
1-1/2"	5.31	4.29	$ 148.40	$ 138.83	8%	$ 171.43	$ 164.80	8%
2"	6.15	6.05	$ 211.19	$ 196.03	8%	$ 243.24	$ 232.3	8%
3"	13.62	13.62	$ 471.62	$ 438.03	8%	$ 542.39	$ 522.87	8%
4"	22.56	23.07	$ 777.14	$ 721.82	8%	$ 953.39	$ 886.01	8%
6"	45.62	46.09	$ 1,571.80	$ 1,459.96	8%	$ 1,936.74	$ 1,710.3	8%
8"	61.12	38.92	$ 2,312.79	$ 2,146.23	8%	$ 2,849.27	$ 2,646.52	8%
10"	91.19	91.79	$ 3,141.95	$ 2,918.32	8%	$ 3,792.41	$ 3,522.64	8%
12"	110.07	119.61	$ 3,888.72	$ 3,611.23	8%	$ 4,449.17	$ 4,132.47	8%
16"	14.36	143.17	$ 4,870.53	$ 4,523.95	8%	$ 5,999.11	$ 5,497.91	8%
20"	166.45	180.00	$ 5,731.96	$ 5,323.85	8%	$ 7,032.44	$ 6,502.02	8%

5.3.3 Summary of Existing and Forecast Wastewater Rates

Based on the calculations from the previous two sections, the existing and proposed rates for the forecast period are shown in Tables 54 and 55 on the following page.

Note that while the test year FY 2015 rates have been calculated within the cost of service study, the rates for FY 2016 and beyond are based on the overall rate revenue increase from the wastewater utility financial plan.

TABLE 54: SUMMARY OF EXISTING AND FORECAST VOLUMETRIC WASTEWATER RATES

CUSTOMER CLASS		Test Year FY 2014 Existing Rates	Test Year FY 2015 Proposed Rates	Forecast FY 2016 Proposed Rates	Forecast FY 2017 Proposed Rates	Forecast FY 2018 Proposed Rates	Forecast FY 2019 Proposed Rates	Forecast FY 2020 Proposed Rates	Forecast FY 2021 Proposed Rates	Forecast FY 2022 Proposed Rates	Forecast FY 2023 Proposed Rates	Forecast FY 2024 Proposed Rates	Forecast FY 2025 Proposed Rates
Total Inside City All Classes	($/CCF)	$ 4.80	$ 5.17	$ 5.53	$ 5.92	$ 6.18	$ 6.31	$ 6.43	$ 6.56	$ 6.69	$ 6.83	$ 6.96	$ 7.10
Total Outside City All Classes	($/CCF)	$ 5.29	$ 5.68	$ 6.08	$ 6.51	$ 6.80	$ 6.94	$ 7.08	$ 7.22	$ 7.36	$ 7.51	$ 7.66	$ 7.81

TABLE 55: SUMMARY OF EXISTING AND FORECAST WASTEWATER FIXED CHARGES

CUSTOMER CLASS	Test Year FY 2014 Existing Rates	Test Year FY 2015 Proposed Rates	Forecast FY 2016 Proposed Rates	Forecast FY 2017 Proposed Rates	Forecast FY 2018 Proposed Rates	Forecast FY 2019 Proposed Rates	Forecast FY 2020 Proposed Rates	Forecast FY 2021 Proposed Rates	Forecast FY 2022 Proposed Rates	Forecast FY 2023 Proposed Rates	Forecast FY 2024 Proposed Rates	Forecast FY 2025 Proposed Rates
Inside City Residential Customers												
5/8"	$ 32.00	$ 34.48	$ 36.90	$ 39.48	$ 41.26	$ 42.08	$ 42.92	$ 43.78	$ 44.66	$ 45.55	$ 46.46	$ 47.39
3/4"	$ 46.92	$ 50.55	$ 54.10	$ 57.89	$ 60.49	$ 61.70	$ 62.94	$ 64.19	$ 65.48	$ 66.79	$ 68.12	$ 69.49
1"	$ 66.34	$ 70.41	$ 75.33	$ 80.61	$ 84.24	$ 85.92	$ 87.64	$ 89.39	$ 91.18	$ 93.00	$ 94.86	$ 96.76
1-1/2"	$ 66.34	$ 70.41	$ 75.33	$ 80.61	$ 84.24	$ 85.92	$ 87.64	$ 89.39	$ 91.18	$ 93.00	$ 94.86	$ 96.76
2"	$ 66.34	$ 70.41	$ 75.33	$ 80.61	$ 84.24	$ 85.92	$ 87.64	$ 89.39	$ 91.18	$ 93.00	$ 94.86	$ 96.76
Inside City Commercial/Industrial Customers												
5/8"	$ 51.92	$ 55.90	$ 59.81	$ 64.00	$ 66.88	$ 68.21	$ 69.58	$ 70.97	$ 72.39	$ 73.84	$ 75.31	$ 76.82
3/4"	$ 64.40	$ 69.31	$ 74.23	$ 79.42	$ 83.00	$ 84.65	$ 86.35	$ 88.08	$ 89.84	$ 91.63	$ 93.47	$ 95.34
1"	$ 84.71	$ 91.20	$ 97.68	$ 104.41	$ 109.11	$ 111.29	$ 113.52	$ 115.79	$ 118.10	$ 120.47	$ 122.88	$ 125.33
1-1/2"	$ 137.84	$ 148.40	$ 158.79	$ 169.91	$ 177.55	$ 181.10	$ 184.73	$ 188.42	$ 192.19	$ 196.03	$ 199.95	$ 203.95
2"	$ 195.16	$ 211.19	$ 225.97	$ 241.79	$ 252.67	$ 257.73	$ 262.88	$ 268.14	$ 273.50	$ 278.97	$ 284.55	$ 290.24
3"	$ 436.05	$ 471.62	$ 504.64	$ 539.95	$ 564.26	$ 575.55	$ 587.06	$ 598.80	$ 610.77	$ 622.99	$ 635.45	$ 648.16
4"	$ 721.84	$ 777.14	$ 831.54	$ 889.75	$ 929.79	$ 948.39	$ 967.36	$ 986.70	$ 1,006.43	$ 1,026.56	$ 1,047.09	$ 1,068.04
6"	$ 1,439.55	$ 1,571.60	$ 1,681.62	$ 1,799.55	$ 1,880.53	$ 1,918.14	$ 1,956.50	$ 1,995.63	$ 2,035.54	$ 2,076.26	$ 2,117.78	$ 2,160.14
8"	$ 2,148.21	$ 2,312.79	$ 2,474.68	$ 2,647.91	$ 2,767.07	$ 2,822.41	$ 2,878.86	$ 2,936.44	$ 2,995.16	$ 3,055.07	$ 3,116.17	$ 3,178.49
10"	$ 2,918.38	$ 3,141.97	$ 3,361.91	$ 3,597.24	$ 3,759.12	$ 3,834.30	$ 3,910.99	$ 3,989.21	$ 4,068.99	$ 4,150.37	$ 4,233.38	$ 4,318.05
12"	$ 3,426.23	$ 3,688.72	$ 3,946.93	$ 4,223.22	$ 4,413.26	$ 4,501.52	$ 4,591.56	$ 4,683.39	$ 4,777.05	$ 4,872.60	$ 4,970.05	$ 5,069.45
16"	$ 4,529.95	$ 4,876.53	$ 5,217.47	$ 5,586.27	$ 5,837.20	$ 5,953.74	$ 6,072.62	$ 6,193.87	$ 6,317.55	$ 6,443.70	$ 6,572.37	$ 6,703.62
20"	$ 5,336.87	$ 5,734.96	$ 6,136.41	$ 6,565.96	$ 6,861.42	$ 6,998.65	$ 7,138.63	$ 7,281.40	$ 7,427.03	$ 7,575.57	$ 7,727.08	$ 7,881.62
Outside City Residential Customers												
5/8"	$ 41.01	$ 44.19	$ 47.28	$ 50.59	$ 52.87	$ 53.93	$ 55.01	$ 56.11	$ 57.23	$ 58.37	$ 59.54	$ 60.73
3/4"	$ 55.01	$ 60.35	$ 64.57	$ 69.09	$ 72.20	$ 73.64	$ 75.12	$ 76.62	$ 78.15	$ 79.72	$ 81.31	$ 82.94
1"	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23	$ 103.26	$ 105.32	$ 107.43	$ 109.58	$ 111.77	$ 114.01
1-1/2"	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23	$ 103.26	$ 105.32	$ 107.43	$ 109.58	$ 111.77	$ 114.01
2"	$ 76.99	$ 82.96	$ 88.76	$ 94.98	$ 99.25	$ 101.23	$ 103.26	$ 105.32	$ 107.43	$ 109.58	$ 111.77	$ 114.01
Outside City Commercial/Industria Customers												
5/8"	$ 59.12	$ 62.57	$ 66.95	$ 71.64	$ 74.86	$ 76.36	$ 77.89	$ 79.44	$ 81.03	$ 82.65	$ 84.31	$ 85.99
3/4"	$ 73.62	$ 79.26	$ 84.81	$ 90.75	$ 94.83	$ 96.73	$ 98.66	$ 100.64	$ 102.65	$ 104.70	$ 106.80	$ 108.93
1"	$ 98.05	$ 105.95	$ 112.95	$ 120.85	$ 126.30	$ 128.82	$ 131.40	$ 134.03	$ 136.71	$ 139.44	$ 142.23	$ 145.08
1-1/2"	$ 164.80	$ 177.43	$ 189.85	$ 203.14	$ 212.28	$ 216.52	$ 220.86	$ 225.27	$ 229.78	$ 234.37	$ 239.06	$ 243.84
2"	$ 232.43	$ 250.24	$ 267.76	$ 286.50	$ 299.39	$ 305.38	$ 311.49	$ 317.72	$ 324.07	$ 330.55	$ 337.17	$ 343.91
3"	$ 522.87	$ 562.99	$ 602.39	$ 644.49	$ 673.50	$ 686.97	$ 700.71	$ 714.72	$ 729.01	$ 743.59	$ 758.47	$ 773.64
4"	$ 885.01	$ 953.09	$ 1,020.66	$ 1,092.10	$ 1,141.25	$ 1,164.07	$ 1,187.36	$ 1,211.10	$ 1,235.32	$ 1,260.03	$ 1,285.23	$ 1,310.94
6"	$ 1,770.13	$ 1,905.74	$ 2,039.14	$ 2,181.88	$ 2,280.07	$ 2,325.67	$ 2,372.18	$ 2,419.62	$ 2,468.02	$ 2,517.38	$ 2,567.72	$ 2,619.08
8"	$ 2,646.52	$ 2,849.27	$ 3,048.72	$ 3,262.13	$ 3,408.93	$ 3,477.11	$ 3,546.65	$ 3,617.58	$ 3,689.93	$ 3,763.73	$ 3,839.01	$ 3,915.79
10"	$ 3,522.54	$ 3,792.41	$ 4,057.88	$ 4,341.50	$ 4,537.31	$ 4,628.05	$ 4,720.62	$ 4,815.03	$ 4,911.33	$ 5,009.55	$ 5,109.75	$ 5,211.95
12"	$ 4,132.57	$ 4,449.17	$ 4,760.62	$ 5,093.86	$ 5,323.08	$ 5,429.54	$ 5,538.14	$ 5,648.90	$ 5,761.88	$ 5,877.11	$ 5,994.66	$ 6,114.55
16"	$ 5,497.91	$ 5,919.11	$ 6,333.45	$ 6,776.79	$ 7,081.75	$ 7,223.38	$ 7,367.85	$ 7,515.21	$ 7,665.51	$ 7,818.82	$ 7,975.20	$ 8,134.70
20"	$ 6,532.02	$ 7,032.44	$ 7,524.72	$ 8,051.45	$ 8,413.76	$ 8,582.04	$ 8,753.68	$ 8,928.75	$ 9,107.33	$ 9,289.47	$ 9,475.26	$ 9,664.77

5.3.4 Projected Residential Wastewater Bills

Table 56 below indicates projected wastewater bills for Residential Inside City customers with a 5/8" meter.

TABLE 56: PROJECTED RESIDENTIAL WASTEWATER BILLS

RATE IMPACT 5/8" Customer	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Monthly Usage (CCF)												
1	$ 36.80	$ 39.65	$ 42.43	$ 45.40	$ 47.44	$ 48.39	$ 49.36	$ 50.34	$ 51.35	$ 52.38	$ 53.42	$ 54.49
2	$ 41.60	$ 44.82	$ 47.96	$ 51.31	$ 53.62	$ 54.70	$ 55.79	$ 56.90	$ 58.04	$ 59.20	$ 60.39	$ 61.60
3	$ 46.40	$ 49.99	$ 53.49	$ 57.23	$ 59.81	$ 61.00	$ 62.22	$ 63.47	$ 64.74	$ 66.03	$ 67.35	$ 68.70
4	$ 51.20	$ 55.16	$ 59.02	$ 63.15	$ 65.99	$ 67.31	$ 68.66	$ 70.03	$ 71.43	$ 72.86	$ 74.31	$ 75.80
5	$ 56.00	$ 60.32	$ 64.55	$ 69.06	$ 72.17	$ 73.62	$ 75.09	$ 76.59	$ 78.12	$ 79.68	$ 81.28	$ 82.90
6	$ 60.80	$ 65.49	$ 70.08	$ 74.98	$ 78.36	$ 79.92	$ 81.52	$ 83.15	$ 84.81	$ 86.51	$ 88.24	$ 90.01
7	$ 65.60	$ 70.66	$ 75.61	$ 80.90	$ 84.54	$ 86.23	$ 87.95	$ 89.71	$ 91.51	$ 93.34	$ 95.20	$ 97.11
8	$ 70.40	$ 75.83	$ 81.14	$ 86.81	$ 90.72	$ 92.54	$ 94.39	$ 96.27	$ 98.20	$ 100.16	$ 102.17	$ 104.21
9	$ 75.20	$ 81.00	$ 86.67	$ 92.73	$ 96.90	$ 98.84	$ 100.82	$ 102.84	$ 104.89	$ 106.99	$ 109.13	$ 111.31
10	$ 80.00	$ 86.16	$ 92.20	$ 98.65	$ 103.09	$ 105.15	$ 107.25	$ 109.40	$ 111.59	$ 113.82	$ 116.09	$ 118.42

6. DISCUSSION OF BEST MANAGEMENT PRACTICES (BMP)

We reviewed the City's water and wastewater utility performance in relation to Best Management Practices that have been published by Fitch Ratings ("Fitch"). These criteria are used by Fitch when reviewing the performance of a utility as part of the bond rating process.

6.1 FINANCIAL PROFILE

"Long term integrated financial forecasting that considers future demand, expected rate increases, regulations, and infrastructure renovation and renewal needs."

In general, the City's practices are consistent with this BMP. This report includes ten year comprehensive financial plans for both the water and wastewater utilities. These were developed in collaboration with City staff and reflect the rate revenue increases necessary to adequately fund operation and maintenance expenditures, make necessary capital improvements and ensure fiscal sustainability for each utility on a going forward basis. In addition to these general objectives, the water utility financial plans reflect the transition from DWSD to the KWA, which is expected to lower the level of future rate increases and afford the City greater control over the water utility's operating costs.

"Policies ensure appropriate financial margins, including debt service coverage and operating liquidity levels."

In general the City is taking steps to improve consistency with this BMP. The aforementioned water and wastewater utility financial plans move the City towards an operating reserve target of 90 days of O&M and debt service. These reserves are critical to mitigate the risk inherent in operating a seasonal enterprise. That said, it is also importance to recognize the sensitivity of ratepayers to further increases, especially given the relatively high level of existing rates. Consequently, the City has decided to work up to the 90 day target over the next few fiscal years to mitigate the potential rate impact.

Coverage of existing water utility debt service is quite strong. This stems primarily from the fact that, given the City's past financial difficulties, it has limited access to capital markets for the purpose of funding its capital improvements. At this time, all major capital improvements are forecast to be made out of current rate revenues. If this policy is maintained throughout the forecast period, water utility debt service coverage will likely continue to improve. In the future the City may choose to leverage its water revenues via the Michigan Drinking Water Revolving Revenue Fund, which would spread the rate impact of the forecast capital improvements. Currently, the City does not have any outstanding wastewater debt.

"Regular financial reporting and monitoring systems enable policymaker's access to timely information on fiscal performance relative to the budget."

It is our understanding that the City's reporting systems are consistent with this BMP.

"Limited exposure to growth sensitive revenues, such as tap, connection, or impact fees."

The City's practices are consistent with this BMP. The City currently receives little to no revenue from growth related fees, mostly due to the fact that customer account growth has largely been negative or flat in recent years. Consequently the City is not overly reliant on such fees. However, if customer account growth becomes positive in the future, the City should consider implementing growth related fees to ensure that new customers are adequately compensating existing customers for their investment in the water and wastewater systems.
"Collection policies that regularly track the rate of timely payment receipts and enforce penalties against late payers or terminate service for non-payment."

The City has taken steps to improve consistency with this BMP. In recent years, account delinquency and non-payment has become a significant problem for the City. In addition, City staff has cited issues regarding potential water theft. Given these challenges, the City has engaged a consulting firm to aid in the analysis of their customer information system data, in an effort to recover the lost revenue associated with these issues. This is a critical in that it ensures paying customers are not bearing the burden of water theft going forward.

"Willingness of political leaders to adjust rates when necessary."

The City's practices are consistent with this BMP. Emergency Manager Darnell Early has the authority to raise rates as necessary to ensure the ongoing financial sustainability of the water and wastewater utilities. It is our understanding however, that input from political stakeholders will continue to be part of that City's rate adjustment process going forward.

"Limited exposure to financial operations of the general government, so that system revenues can be relied upon for use to operate and improve the utility. For transfers to the general fund policies that specifically limit their scope and growth are favorable."

The City is taking steps to improve consistency with this BMP. It is our understanding that approximately $10 million is due from the City's general fund to the water and wastewater utilities. A potential course of action would be to reduce the amount of administrative fees the water and wastewater utilities pay each year to the general fund, until the amount owed is paid back in full. Regardless of the method, the City has indicated that, as a worst case scenario, the general fund would repay the amount owed to the water and wastewater utilities by FY 2019.

"Compliance with industry accounting practices and establishment of appropriate internal controls."

It is our understanding that the City's accounting practices adhere to the generally accepted accounting practices ("GAAP") set forth by the Governmental Accounting Standards Board ("GASB").

"Rate affordability guidelines that consider absolute levels of rates and their affordability relative to income levels."

The City is working to improve consistency with this BMP. Affordability is a critical consideration for the City especially given the relatively high level of existing rates. As mentioned above, a key component of this study involved analyzing the impact of transitioning from DWSD to the KWA, a policy which should generate savings to ratepayers in lieu of what would have happened had the City continued to purchase water from DWSD.

6.2 DEBT PROFILE RELATED

"Prioritized capital improvement plans that cover at least five years and consider capacity, supply, regulatory and replacement and renewal needs."

The City's practices are consistent with this BMP. The City has provided five year capital improvements plans for the water and wastewater utilities as well as guidance for forecasting beyond that period, both of which have been incorporates into the water and wastewater financial plans. Based on our experience with utility operations and an examination of the provided plans, it is our opinion that the City is working to address capacity, supply and regulatory issues.

"Debt issuance policies including types, terms, and suitability under specific conditions, as well as the amount of variable-rate debt deemed appropriate."

Currently the City's wastewater utility has no debt and the level of water utility relatively modest. Though the debt associated with the joining KWA will increase this amount in the coming years, it will not reach unsustainable levels.

"Development of comprehensive policies on the use of hedge agreements and their disclosure prior to entering into any such agreements."

The water and wastewater utilities are not currently party to any such agreements and there are no plans to utilize such agreements in the future.

6.3 OPERATING PROFILE RELATED

"Key management industry experience and active participation in organizations that keep pace with sector issues, regulatory mandates and technological advances."

The City's practices are consistent with BMP in this regard.

"Use of professional engineers, either within the utility or outside of it, to prepare objective reviews of system performance and needs on regular basis and provide periodic revisions to construction cost estimates."

The City's practices are consistent with BMP in this regard.

"Regular consultation with regional and local growth planners, community development officials, and demographers to predict and, if possible, limit infrastructure needs related to population and business growth."

The City has been very active in such activities in recent years, as evidenced by their participation in the KWA effort to secure a more economical source of water to better meet the City's needs in the future.

APPENDICES

APPENDIX A: ALTERNATIVE WATER VOLUMETRIC RATES

	% Allocation of Costs to Blocks			Allocation of Cost Components to Blocks			Test Year	M/D Differential			Block Rate Calculations				
	Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Base Demand Units	Max Day Extra Capacity	Max Hour Extra Capacity	Consumption By Block CCF	Test Year Differential Times Inside City	Test Year Adjusted Consumption CCF	Test Year Composite Consumption CCF	Test Year Proposed Steepness	Existing Rates	Test Year FY 2015 Proposed Block Rates $	Difference $	Difference %
RATE DESIGN BY CUSTOMER CLASS															
Inside City Residential															
Inside City Block 1	100%	65%	50%	$ 1,000,619	$ 7,400,474	$ 300,545	1,025,910	1.000	1,025,910	1,025,790	1.30	$ 7.52	$ 6.50	$ (1.02)	-14%
Inside City Block 2		15%	5%	$ -	$ 1,017,500	$ 30,054	90,299	1.000	90,299	89,924	1.25	$ 7.31	$ 6.25	$ (1.06)	-15%
Inside City Block 3	0%	0%	45%	$ -	$ -	$ 270,490	31,020	1.000	31,020	31,020	1.00	$ 5.79	$ 5.00	$ (0.79)	-14%
	100%	100%	100%	$ 1,000,619	$ 8,700,440	$ 610,008	1,745,505		1,745,505	1,797,703					
Outside City Residential															
Outside City Block 1	100%	65%	50%	$ 7,017	$ 45,590	$ 1,094	7,229	1.500	10,843		1.30	$ 11.26	$ 9.74	$ (1.50)	-13%
Outside City Block 2		15%	5%	$ -	$ 9,046	$ 108	804	1.500	1,205		1.25	$ 10.77	$ 9.37	$ (1.39)	-13%
Outside City Block 3	0%	0%	45%	$ -	$ -	$ 1,625	-	1.500	-		1.00	$ 9.00	$ 7.90	$ (1.10)	-14%
	100%	100%	100%	$ 7,017	$ 50,642	$ 3,008	11,122		12,100						
Total Residential															
Inside City Commercial/Industrial															
Inside City Block 1	100%	65%	50%	$ 3,958,400	$ 7,042,174	$ 277,702	111,702	1.000	111,702	116,660	1.30	7.518	$ 9.57	$ 2.05	27%
Inside City Block 2		15%	5%	$ -	$ 1,242,737	$ 27,770	860,757	1.000	860,757	895,167	1.25	7.31	$ 9.20	$ 1.89	26%
Inside City Block 3	0%	0%	45%	$ -	$ -	$ 250,013	511,780	1.000	511,780	531,822	1.00	5.702	$ 7.35	$ 1.57	27%
	100%	100%	100%	$ 3,958,400	$ 8,284,911	$ 555,585	1,484,230		1,484,230	1,523,650					
Outside City Commercial/Industrial															
Outside City Block 1	100%	65%	50%	$ 68,646	$ 166,617	$ 5,032	3,218	1.500	4,948		1.30	11.259	$ 14.35	$ 3.10	27%
Outside City Block 2		15%	5%	$ -	$ 20,226	$ 503	9,607	1.500	14,410		1.25	10.765	$ 13.80	$ 3.04	28%
Outside City Block 3	0%	0%	45%	$ -	$ -	$ 5,338	13,061	1.500	20,042		1.00	8.677	$ 11.04	$ 2.37	27%
	100%	100%	100%	$ 68,646	$ 184,843	$ 11,863	25,286		30,400						
Total Commercial/Industrial															
Inside City Lawn															
Inside City Block 1	100%	65%	50%	$ 22,120	$ 251,357	$ 7,113	5,504	1.000	5,504	5,504	1.30	7.518	$ 27.01	$ 19.49	259%
Inside City Block 2		15%	5%	$ -	$ 44,428	$ 711	7,082	1.000	7,082	7,082	1.25	7.31	$ 25.97	$ 18.65	255%
Inside City Block 3	0%	0%	45%	$ -	$ -	$ 6,402	-	1.000	-	-	1.00	5.702	$ 20.77	$ 14.98	263%
Outside City Lawn															
Outside City Block 1	100%	65%	50%	$ -	$ -	$ -	-	1.500	-		1.30	11.259	$ 40.51	$ 29.25	260%
Outside City Block 2		15%	5%	$ -	$ -	$ -	-	1.500	-		1.25	10.765	$ 38.95	$ 28.19	262%
Outside City Block 3	0%	0%	45%	$ -	$ -	$ -	-	1.500	-		1.00	8.677	$ 31.16	$ 22.48	259%
	100%	100%	100%	$ -	$ -	$ -	$ -		-						
Total Lawn															

APPENDIX B: ALTERNATIVE WASTEWATER VOLUMETRIC RATES

	Composite Revenue Requirement	Test Year Volumes					Test Year Rate Calculation			
		Test Year Billed Volumes CCF	Test Year Billed Volumes % Breakdown	Test Year Differential ____ Times Inside City	Test Year Adjusted Consumption CCF	Test Year Composite Consumption CCF	Test Year Volumetric Rates $/CCF	Existing Volumetric Rates $/CCF	Difference $	Difference %
RATE DESIGN BY CUSTOMER CLASS										
Total Inside City Residential COS										
Total Inside City Residential COS Adjustment										
Total Inside City Residential	$ 5,809,328	1,576,666	52.88%	1.000	1,576,666	1,576,892	$ 3.49	4.8	$ (1.31)	-27%
Total Outside City Residential COS										
Total Outside City Residential COS Adjustment										
Total Outside City Residential		241	0.01%	1.111	264		$ 3.814	5.245	$ (1.44)	-27%
Total Inside City Commercial/Industrial COS										
Total Inside City Commercial/Industrial COS Adjustment										
Total Inside City Commercial/Industrial	$ 9,908,586	1,398,721	46.90%	1.000	1,398,721	1,406,434	$ 7.05	4.8	$ 2.25	47%
Total Outside City Commercial/Industrial COS										
Total Outside City Commercial/Industrial COS Adjustment										
Total Outside City Commercial/Industrial		7,012	0.24%	1.100	7,713		$ 7.75	5.295	$ 2.45	47%

From: Hollins, Harvey (GOV)
Sent: Thursday, February 12, 2015 3:59 PM
To: Workman, Wayne (TREASURY); Saxton, Thomas (Treasury); Baird, Richard (GOV); Muchmore, Dennis (GOV)
Subject: RE: Flint water

Thanks Wayne.

From: Workman, Wayne (TREASURY)
Sent: Wednesday, February 11, 2015 3:02 PM
To: Saxton, Thomas (Treasury); Hollins, Harvey (GOV); Baird, Richard (GOV); Muchmore, Dennis (GOV)
Subject: Fwd: Flint water

See below from Jerry

Sent from my iPhone

Begin forwarded message:

> **From:** "Gerald Ambrose" <gambrose@cityofflint.com>
> **To:** "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>
> **Cc:** "Widigan, Robert (TREASURY)" <WidiganR@michigan.gov>, "amooney@cityofflint.com" <amooney@cityofflint.com>, "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>
> **Subject: Re: FW: Flint water**
>
> We followed the recommendations of the RFC rate study. Their recommendations encompassed the knowledge of leaving DWSD, as well as the impending increase in costs associated with KWA once connected (City share of debt service), and the need for significant reinvestment in the utility system infrastructure, and a desire to level out future rate increases.
>
> Copy of the RFC study attached.
>
> Jerry
>
> On Wed, Feb 11, 2015 at 12:31 PM, Workman, Wayne (TREASURY) <WorkmanW@michigan.gov<mailto:WorkmanW@michigan.gov>> wrote:
> Please see Harvey`s question as to rationale for 2014 rate increase
>
> From: Hollins, Harvey (GOV)
> Sent: Wednesday, February 11, 2015 12:27 PM
> To: Saxton, Thomas (Treasury)
> Cc: Muchmore, Dennis (GOV); Wisniewski, Wendy (GOV); Workman, Wayne (TREASURY)
> Subject: Re: Flint water
>
> Why did the rates go up after the connection to the Flint river?

Best,
Harvey

On Feb 11, 2015, at 12:21 PM, Saxton, Thomas (Treasury)
<SaxtonT@michigan.gov<mailto:SaxtonT@michigan.gov>> wrote:
Dennis – the attached pdf is the memo & table that hopefully addresses some of the info needs stemming from the meeting with the pastors last week. Jerry A. has looked at this document as well. In terms of key items at this point (that are mentioned in the memo)….

KWA may be hooked up by the end of this calendar year; weather permitting, etc. Even allowing for some slippage that is positive news

Whether you hooked to DWSD thru the county or directly; it is a $1mm add'l impact to the budget… an add'l 30% increase in rates over existing

They have $2mm already baked in the budget to fix that two mile 'bad' section of pipeline that might address a good portion of the current issues

They now have an outside consultant on the ground who is suppose to provide some preliminary indications next week to help improve the situation

Don't forget about the $2mm SRF loan restructuring (which we have not officially put on the table). Those $s would be available for more system improvements.

Again, sorry this took as long as it did. Let us know if this is what you had in mind or if you need anything else. Wayne – chime in if I missed anything.

See you @ 1:30

<FlintWater.pdf>

From: Hollins, Harvey (GOV)
Sent: Monday, February 16, 2015 2:23 PM
To: Muchmore, Dennis (GOV)
Subject: Re: Flint Water Bills

Follow Up Flag: Follow up
Flag Status: Completed

Thanks, that background is helpful.

I followed up with Detroit last week on the bill extensions and cut offs and the program is working better than expected. This is a model that I will be working with Jerry to adopt in Flint

Best,
Harvey

> On Feb 16, 2015, at 12:41 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
>
> This is an old note which summarizes some of the early issues with the system and why they wanted to go to the KWA. Thought you might be interested. Did we get any info for the ministers about how the Detroit bill extensions and cut offs are working?
>
> From: Stibitz, Brom (Treasury)
> Sent: Monday, March 04, 2013 4:00 PM
> To: Muchmore, Dennis (GOV)
> Cc: Dillon, Andy (Treasury)
> Subject: Flint Water Bills
>
> Dennis,
>
> There is some information attached on the Flint water issue you asked us about. I summarize a few of the key points:
>
>
> · The water system has been running at deficits for years. When the previous EFM left the City in 2004, the water system has a reserve of approximately $60 million. When Mike Brown was appointed, this had turned into a $20 million deficit due to years of not passing along to consumers the rate increases of over 10% hitting the system from DWSD. Slides 5 & 6 of the attached power point show this pretty dramatically.
>
> · Substantial increases over the past few years are an attempt to reflect the actual costs of running the system.
>
> · Another concern raised by DHS was the increase in the deposit for rental properties. This was necessary because renters paid the previous $100 deposit, then racked up water bills in excess of this amount and walked away. Of the affidavits currently out there, 82% are past due. I would also note that this is not mandatory, it is only required if a landlord is not willing to put the water bill in their name.
>
> · The bottom line is that they realize it is an issue, but the General Fund doesn't have the money to run general City operations, much less subsidize water rates.
>

> The two page word document (attached) provided by the EFM gives you a good overview of what is going on. They believe that a switch to KWA is part of the solution for high water rates in the City.
>
> Brom
>
> <Water Forum - Final.ppt>
> <WATER RATES deposits.doc>

From: Hollins, Harvey (GOV)
Sent: Thursday, February 19, 2015 2:55 PM
To: Muchmore, Dennis (GOV)
Subject: Fwd: Flint Water Cost Analysis
Attachments: DWSD Switch Impact (2).xlsx; ATT00001.htm

Chief--this is getting weird, the manner that I am using for comparison is the format provided by Treasury. Smh

Best,
Harvey

Begin forwarded message:

> **From:** Elizabeth Murphy <emurphy@cityofflint.com>
> **Date:** February 19, 2015 at 9:49:18 AM EST
> **To:** "Harvey Hollins (GOV)" <hollinsh@michigan.gov>
> **Cc:** Gerald Ambrose <gambrose@cityofflint.com>, "Wayne Workman (TREASURY)" <WorkmanW@michigan.gov>
> **Subject: Flint Water Cost Analysis**
>
> Mr. Hollins,
> Jerry Ambrose asked me to respond to your request for more information on the Flint water cost analysis chart which you sent him yesterday. Please see the attached chart; it contains an added analysis by Jerry. The sections for which you asked for data can not be provided as we don't calculate prices in the manner you are comparing.
>
> Jerry's chart clearly represents what Flint has been talking about - a major increase in water rates would be necessary to pay the additional charge to purchase DWSD water.
>
> --
> Liz Murphy
> Assistant to the Emergency Manager
> City of Flint
> 810 237 2025

	B	C	D	E	F	G	H
2		Current Operations		DWSD Reconnect		Impact on Switch to DWSD on the FY 15 Flint Budgeted Water Revenue Set at $37,000,000	% Rate Increase needed to adjust to DWSD Switch
3		Monthly	Annual	Monthly	Annual		
4	Water Usage MCF	71,594	859,128	71,594	859,128		
5	Price Per MCF			$ 14.92	$14.92		
6							
7	Cost of Water Usage per MCF			$ 1,068,182.48	$ 12,818,189.76	$ 12,818,189.76	34.64%
8	Fixed Charge/Month			$ 846,700.00	$ 10,160,400.00	$ 22,978,589.76	62.10%
9	Flint Incremental Cost of Treatment Plant Operation (to continue as a back-up only)	$ 239,587.00	$ 2,875,044.00	$ (239,587.00)	$ (2,875,044.00)	$ 20,103,545.76	54.33%
10	Flint Set aside	$ 250,000.00	$ 3,000,000.00	$ (250,000.00)	$ (3,000,000.00)	$ 17,103,545.76	46.23%
11	Flint Professional Services	$ 700,000.00	$ 8,400,000.00	$ (700,000.00)	$ (8,400,000.00)	$ 8,703,545.76	23.52%
12	Cost of Water/Month Avg.	$3,083,333.33	$37,000,000.00	$ 725,295.48	$ 8,703,545.76	$ 8,703,545.76	23.52%
13							
14	Rate Increase if the New Fee Collection Level to Handle DWSD Additional Cost was $48,403,542					$ 11,403,542.00	30.82%
15							
16		**System Cost**		**Av Cost/resident**			
17		**Annual**	**Monthly**	**Annual**	**Monthly**		
18							
19	**2015 Budgeted Revenues for Water**	**$37,000,000**	**$3,083,333**	**$1,788**	**$149**		
20							
21							
22	Add fixed charge for DWSD	$10,160,400	$846,700				
23	Add commodity charge from DWSD	$12,818,190	$1,068,182.50				
24	Deduct cost for WTP water operations	-$2,875,044	-$239,587				
25	Deduct Flint Set aside	-$3,000,000	-$250,000				
26	Deduct All Maintence and Improvement Costs*	-$8,400,000	-$700,000				
27							
28	**Additional Costs with DWSD**	**$45,703,546**	**$3,808,629**	**$2,208.59**	**$184.05**		
29	Increase ($)	$8,703,546	$725,296	$420.59	$35.05		
30	Increase(%)	23.52%	23.52%	23.52%	23.52%		
31							
32	* NOTE: DEDUCTING ALL MAINTENANCE AND IMPROVEMENT COSTS IS UNREALISTIC AND FURTHER DEGRADES THE SYSTEM			Given the note, this would likely be the minimum rates would need to be increased			

From: Hollins, Harvey (GOV)
Sent: Friday, February 20, 2015 12:57 PM
To: Elizabeth Murphy
Cc: Gerald Ambrose; Workman, Wayne (TREASURY)
Subject: RE: Flint Water Cost Analysis

Ms. Murphy,
Thank you. The calculations in the table was provided by treasury and I was seeking clarification. I am not a water expert, but I learned that typically, most rates have two components.

1. Fixed-cost recovery charge
This charge is based on the size of the water meter at the home or business. Most residential customers will have a meter between 5/8$^{th's}$ of an inch and 1 inch.

2. Consumption Charge
This charge is based on the amount of water used. The rate for usage is determined by the distance and elevation of the home or business from the water source.

MCF is used in many place for calculating rates; however, since Flint is currently not using this calculation, what are the cost components that make up the $149 avg. monthly charge to the resident?

Best,
Harvey

From: Elizabeth Murphy [mailto:emurphy@cityofflint.com]
Sent: Thursday, February 19, 2015 9:49 AM
To: Hollins, Harvey (GOV)
Cc: Gerald Ambrose; Workman, Wayne (TREASURY)
Subject: Flint Water Cost Analysis

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Liz Murphy

Assistant to the Emergency Manager
City of Flint
810 237 2025

From: Hollins, Harvey (GOV)
Sent: Friday, February 20, 2015 2:47 PM
To: Gerald Ambrose
Cc: Elizabeth Murphy; Workman, Wayne (TREASURY)
Subject: Re: Flint Water Cost Analysis

Jerry,
Thank you very much. I believe 1MCF equals 7480 gallons of water. If that is true then 10 units = 1 MCF.
Best,
Harvey

On Feb 20, 2015, at 1:40 PM, Gerald Ambrose <gambrose@cityofflint.com> wrote:

> Harvey,
>
> Quick response, subject to verification by Liz Murphy:
>
> Components of the average charge:
>
> $ 57.38 fixed-cost recovery charge
> $ 91.63 consumption charge
> $149.01
>
> Consumption charge based on 7 units of water @$13.09 per unit
>
> 1 unit = 748 gallons of water
>
> There may be a way to convert a unit into an MCF, but I do not know it.
>
> Jerry
>
> On Fri, Feb 20, 2015 at 12:56 PM, Hollins, Harvey (GOV) <hollinsh@michigan.gov> wrote:
>
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Liz Murphy

Assistant to the Emergency Manager

City of Flint

810 237 2025

From: Jason Lorenz <jlorenz@cityofflint.com>
Sent: Friday, January 02, 2015 7:21 PM
Subject: PRESS RELEASE: Flint Takes Steps to Address Water System Issues
Attachments: Flint Water TTHM Release.pdf

For Immediate Release:

City of Flint Takes Proactive Measures to Improve Water Distribution System and Address Compliance Issues

Flint, Michigan – January 2, 2015 – The City of Flint's Department of Public Works has been actively working to address upgrades and repairs to the city's water distribution system. These actions appear to have corrected several long time concerns with the system as well as known compliance issues with the system, including a recent temporary increase in the maximum contamination level (MCL) of trihalomethanes (TTHM) found in water samples collected from the system during a testing period which ended November 30, 2014. The public was notified of the violation as a precautionary measure as required by the Michigan Department of Environmental Quality (MDEQ).

TTHM is a common by-product of the water chlorination process. Increased levels in some water samples collected in the city were an indicator of weaknesses in the distribution system and treatment process, which were due to years of deferred repairs and upgrades to a very old system. The City of Flint's DPW is and has been pursuing a comprehensive plan to make critical upgrades to its water distribution system for the long term health and operation of the system and to mitigate any future issues.

The levels of TTHM in the water were elevated marginally above the MCL in some samples, resulting in a less urgent "Tier 2" Environmental Protection Agency notification. This means that the EPA believes there is no immediate risk to consumers and/or the system may have already returned to acceptable levels by the time the notice was issued. Although TTHM is considered to be an environmental pollutant that can be carcinogenic, it

can only be hazardous if consumed in water containing the elevated levels at a rate of two liters per person, per day for 70 years. The City of Flint wants to assure the public that according to the MDEQ the water is safe for drinking and all other purposes.

The City of Flint worked closely with the MDEQ to correct the issue by flushing hydrants and replacing key valves in the distribution system. These measures have shown to be effective in not only lowering the TTHM levels in the system, but have also improved the overall health of the system. The Michigan DEQ has acknowledged and appreciates the progress of the City's preemptive evaluation of operations which identified the deficiencies and the corrective measures being taken. The latest round of testing has shown a significant decrease in levels across the board, with most samples falling well below the MCL. It is expected that all sample levels will be well below the MCL in the next round of quarterly scheduled testing in March of 2015.

Flint's DPW welcomes the rigorous review of the MDEQ to ensure steady progress is made on this important issue. "Our proactive plan of replacing valves, flushing hydrants and making other adjustments to the system has shown both promising short term results as well as strengthening our water distribution capability in the long term," said Flint DPW Director Howard Croft. Both the City of Flint and the MDEQ expect the corrective measures being implemented will resolve the issue by early 2015.

The improvements in MCL levels also mirror the increased consistency being seen in chlorine residuals, flow rates, and overall water quality within the city. As part of the DPW strategic plan and Capital Improvement Plan, there are additional improvements coming to the 600 miles of distribution main including, pipe replacements, leak detection, hydraulic modeling, and enhanced asset management features. The Department of Public Works will continue to provide public education and communication about the quality, the process, and the continual improvements occurring within the system as part of the overall management of the water system.

–END–

Interviews can be arranged by responding to this email with requests.

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039
jlorenz@cityofflint.com

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
DARNELL EARLEY
ICMA-CM, MPA

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–CONTINUE–

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
DARNELL EARLEY
ICMA-CM, MPA

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CITY OF FLINT
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–END–

From: Murray, David (GOV)
Sent: Monday, January 26, 2015 4:34 PM
To: Hollins, Harvey (GOV); Muchmore, Dennis (GOV)
Subject: FW: dayne walling/request for comment
Attachments: flintwater_oped_final1.docx

Hi Chief and Harvey,

Sara asked me to put this Flint Journal guest column from the Flint mayor (attached) on your radar. Mayor Walling is seeking to drag the governor into the conflict with both hands, even demanding that the governor visit the city.

Sara mentioned that it was the City of Flint that wanted to make the change in the first place, and wanted to determine whether that's a point you think we should make. We've been staying very high-level at this point.

Thanks for your assistance!

Dave

From: Fonger, Ronald
Sent: Monday, January 26, 2015 2:28 PM
To: Murray, David
Subject: dayne walling/request for comment

Dave:
I'm attaching an op-ed that Flint Mayor Dayne Walling has given MLive-The Flint Journal. I'm writing a story about his request that the governor visit Flint.
I did hear back from Terry Stanton the last time we asked for a response to the mayor's water improvement plan and I used his comments, however Walling has told me since that he's expecting a response from the governor himself and I'll probably be using that in the story I'm working on also.

Ron Fonger
MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

By Flint Mayor Dayne Walling

Access to safe and clean water is a basic human right. And a citizen's right to safe drinking water should not be based on how much money you earn, the neighborhood you live in or if your local government is under the control of an emergency manager.

All citizens have a fundamental right to know that such a critical resource as their water supply is safe and accessible. But that is not happening in Flint at the moment.

That is why, on January 18th, I forwarded a request that Governor Snyder adopt my Flint Water Improvement Plan. My plan, focused on the areas of safety, quality, access, investment and education, starts by calling for 100 percent safety as the standard for water.

The plan calls for reporting of water testing to the public by city officials, an amnesty program to reduce fees for Flint water turn-ons, accelerated water system capital improvements and partnerships with community organizations to help with water payment assistance. I'm also reaching out to other state and elected officials for support.

The request comes as residents, as evidenced in a series of recent community meetings, continue to have concerns about the quality of Flint's water. Earlier in 2014, several boil-the-water advisories were issued by the city because of issues with bacteria found in water in some parts of Flint. Gov. Snyder's appointed emergency manager recently told customers that Flint was in violation of the Safe Drinking Water Act because of the high level of trihalomethane (TTHM) -- a byproduct of chlorination -- in drinking water samples last year.

A contradictory order from the city saying the water was safe but could present risks for infants, the elderly and those with compromised immune systems confused residents further and compounded the worries of Flint's vulnerable populations. Marry that with costly water rates that have threatened individuals' access and you have the crisis of concern and confidence swirling in Flint today.

Sadly, because Flint is under Michigan's controversial emergency manager system of governance, locally elected officials have been largely limited to serving as sounding boards to justifiably worried Flint residents.

This is unacceptable. Not only should Governor Snyder visit Flint in the midst of this ongoing crisis, but his administration should make it the priority that the community expects.

It's time for the Snyder administration to do what is best for the citizens of Flint---immediately. There is nothing more important in Flint right now than fixing the water problems.

This will take time and money so the sooner the new investments are made, the better.

From: Wurfel, Brad (DEQ)
Sent: Monday, February 09, 2015 9:21 AM
To: Wheaton, Bob (DHS); Lasher, Geralyn (DCH)
Cc: Muchmore, Dennis (GOV); Murray, David (GOV); Minicuci, Angela (DCH); Stanton, Terry A. (Treasury)
Subject: FLINT WATER NOTES

Hey, friends. Anticipating more coverage this week on Flint, want to make sure we are all looped in and on the same page. Treasury takes calls on funding and money and the EM. DEQ takes calls on water quality. Here's what I can share about the water quality part.

Total Trihalomethanes (TTHM) are a byproduct of too much chlorine to kill organic material in a water supply. They are among the 80 toxins water suppliers monitor. They are considered a long-term health hazard. As such, they're sampled from water systems every quarter. Systems are required to remain below 80 parts per billion on a yearly average (four quarters). Flint exceeded the average in the course of three quarters last year.

Water system operators around the state periodically get a high result for TTHMs. When consecutive quarters of testing remain at high levels, it's usually a sign that operators are using too much chlorine to address high levels of organic matter in their water source. This most frequently affects systems that use surface water as a source. And several municipal water systems around the state do use surface water (rivers) as a source.

When a water system exceeds this standard, the operator gets a very formally worded violation notice from DEQ that says, effectively, "hey, your numbers are high. Alert your customers and figure out how you're going to bring your numbers back down." This is not as serious as a boil water advisory situation. But, the (think decades) long-term risk of drinking water with high TTHMs is an increased risk of exposure to cancer causing agents, so it's not a situation that the state can accept as status quo.

Because TTHM is measured on an annual (quarterly) basis, it will take a couple quarters of clear results before the city's average falls below the guidelines. This means Flint will probably be issuing another public notice about TTHM in March, despite that the high samples were late last summer.

Flint's numbers have dropped dramatically since the November testing and they're presently in compliance with state drinking water standards.

The water as it leaves the plant is clean, sanitary and safe. However, the water supply system is old, poorly maintained and many residents' connections are also old and poorly maintained. Thus, some residents are experiencing water that smells off or is discolored. This is from the transmission system, not the production system. The three top issues appear to be

a. Hard water interacting with cast iron pipes, causing water that looks rusty (and likely tastes a bit irony)
b. Water sitting too long in the pipes because of valves not working properly or limited users in some sections of the system; or,
c. Residents with old homes that have cast iron connections contributing to the hard water issue.

So, how do we message this issue in light of the many variables at play?

1. Right now, water produced at the Flint plant is meeting state safe drinking water standards.
2. DEQ is aware that many residents have concerns about smell, color and other aesthetic qualities of their water. There are several potential causes for aesthetic water conditions. Residents with these concerns are encouraged to contact the City first to report problems. They also can contact the Michigan DEQ, but the City operates the system and needs to be alerted to concerns with their system to help document problem areas and prioritize improvements.
3. Total Trihalomethane (TTHM) is odorless and colorless. It is regarded as a long-term health concern. TTHM was included in the list of toxins screened under the Safe Drinking Water Act because of its potential for long-term potential health concerns. This is why it is only sampled quarterly. The water operator is required by law to notify residents when the annually averaged

standard has been exceeded, and the system operator is required to take active steps to get back into compliance with the standard for TTHM.

4. Residents received notice because the law requires transparency and works to help ensure residents can make informed decisions. The notice residents received early this month is a totally separate issue from the water discoloration issues some residents are reporting.
5. The DEQ continues working with Flint Water system operators to ensure that residents receive water that complies with state drinking water standards. This system is tested regularly and rigorously, and the results are reported to customers as outlined in the Safe Drinking Water Act.

From: Wheaton, Bob (DHS)
Sent: Wednesday, February 04, 2015 3:57 PM
To: Wurfel, Brad (DEQ)
Subject: RE: IMPORTANT MEDIA ISSUE Please call

Here's what our Bureau of Children and Adult Licensing emailed on Friday:

City of Flint Warns of Potential Health Risks Caused by the City's Drinking Water

The city says there's been too much disinfection byproduct in Flint's water system recently, something that -- over many years could cause liver, kidney or central nervous system problems and an increased risk of cancer.

The notice from the city says Flint water is safe to drink but warns that those with a severely compromised immune system, who have an infant or who are elderly may be at increased risk and should seek advice about drinking water from their health care provider.

For others, there is no need to boil water or take other actions, the notice says.

It is recommended that licensed child care providers and licensed adult foster care and homes for the aged providers seek medical advice or use bottle water when serving individuals at increased risk as outlined above.

For more information, go to to the city's website at http://cityofflint.com.

From: Wheaton, Bob (DHS)
Sent: Wednesday, February 04, 2015 3:41 PM
To: Wurfel, Brad (DEQ); Tommasulo, Karen (DEQ)
Cc: Feuerstein, Heather (DEQ)
Subject: IMPORTANT MEDIA ISSUE Please call
Importance: High

Hi Brad, Karen,

Could one of you call me ASAP regarding a media crisis having to do with Flint water?

Thanks!

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
Cell: [redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

From: Wheaton, Bob (DHS)
Sent: Monday, February 09, 2015 9:59 AM
To: Wurfel, Brad (DEQ)
Cc: Lasher, Geralyn (DCH); Muchmore, Dennis (GOV); Murray, David (GOV); Minicuci, Angela (DCH); Stanton, Terry A. (Treasury)
Subject: Re: FLINT WATER NOTES

Follow Up Flag: Follow up
Flag Status: Flagged

Thanks, Brad. I'll let you know of any media inquiries.

Sent from my iPhone

On Feb 9, 2015, at 9:20 AM, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov> wrote:

> Hey, friends. Anticipating more coverage this week on Flint, want to make sure we are all looped in and on the same page. Treasury takes calls on funding and money and the EM. DEQ takes calls on water quality. Here's what I can share about the water quality part.
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P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
Cell: [redacted]
WheatonB@michigan.gov
www.michigan.gov/dhs

From: Jason Lorenz <jlorenz@cityofflint.com>
Sent: Tuesday, February 10, 2015 2:56 PM
Subject: PRESS RELEASE: Water Consultant Announcement
Attachments: Water Consultant Announcement 2.10.15.pdf

For Immediate Release

Flint Hires International Urban Water Experts of Veolia North America to Assess City's Water Issues

Flint, Michigan – February 10, 2015 – The City of Flint has retained a team of urban water experts from Veolia North America to conduct an analysis of the city's water system. Veolia, which is the world's largest water services and technology company, will assess how Flint's water is tested and distributed, including reviewing water treatment processes and operations, laboratory testing and analysis, and engineering reports that detail the city's treatment and distribution systems.

"We understand the frustration and urgency in Flint," said David Gadis, vice president of Veolia North America's Municipal & Commercial Business. "We are honored to support your community with our technical expertise so that together we can ensure water quality for the people of the city of Flint."

Veolia anticipates its analysis to take less than two weeks, at which time they will present findings to City officials, including the Mayor, City Council and the Emergency Manager. Once the findings are presented, city officials will determine how to move forward.

"Addressing the City's water challenges are the top priority right now and it is important to bring in an independent, highly qualified team to work with us to address the safety and quality issues," said Mayor Dayne Walling.

"Until we have completed our analysis, we cannot say for certain how long it will take to provide solutions to Flint's current water situation," said Gadis. "We have extensive experience handling challenging river water sources, reducing leaks and contaminants and in managing discolored water."

"Veolia worked diligently to respond to our Request For Proposal in a thorough, professional way and demonstrated the ability to immediately support us as we ensure safe, clean water for our residents," said Emergency Manager Jerry Ambrose.

The Veolia team hit the ground running Tuesday morning, meeting with water officials to provide an overview of the work to be conducted. "We look forward to helping Flint's team find ways to address and improve the city's drinking water operation," Gadis said.

The company designs and provides water, waste and energy management solutions to communities and industries across the country, including providing water and wastewater services to 530 communities in North America. More information is available at www.veolianorthamerica.com.

–END–

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039
jlorenz@cityofflint.com

Gerald Ambrose
Emergency Manager

Dayne Walling
Mayor

Jason Lorenz
Public Information Officer
(810) 237-2039
jlorenz@cityofflint.com

For Immediate Release

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–CONTINUE–

Gerald Ambrose
Emergency Manager

Dayne Walling
Mayor

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–END–

From: Saxton, Thomas (Treasury)
Sent: Thursday, February 19, 2015 5:33 AM
To: Muchmore, Dennis (GOV); Baird, Richard (GOV)
Cc: Hollins, Harvey (GOV); Workman, Wayne (TREASURY)
Subject: Fwd: Copy of Presentation
Attachments: Flint Public Works Committee Interim Report V6 - Final.pptx; ATT00001.htm

... here is the Veolia initial report I just mentioned. Wayne & Harvey you already should have it.

Begin forwarded message:

> **From:** "Gerald Ambrose" <gambrose@cityofflint.com>
> **To:** "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>, "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>, "Byrne, Randall (Treasury)" <ByrneR1@michigan.gov>, "Koryzno, Edward (Treasury)" <KoryznoE@michigan.gov>, "Widigan, Robert (TREASURY)" <WidiganR@michigan.gov>, "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>
> **Subject: Fwd: Copy of Presentation**
>
> Veolia presentation...interim report
>
> ---------- Forwarded message ----------
> From: "Nicholas, Robert" <robert.nicholas@veolia.com<mailto:robert.nicholas@veolia.com>>
> Date: Feb 18, 2015 4:03 PM
> Subject: Copy of Presentation
> To: <jlorenz@cityofflint.com<mailto:jlorenz@cityofflint.com>>, "Elizabeth Murphy" <emurphy@cityofflint.com<mailto:emurphy@cityofflint.com>>, "Howard Croft" <hcroft@cityofflint.com<mailto:hcroft@cityofflint.com>>, "gambrose@cityofflint.com<mailto:gambrose@cityofflint.com>" <gambrose@cityofflint.com<mailto:gambrose@cityofflint.com>>
> Cc:
>
> Good Afternoon
>
> You will find attached a copy of the presentation for this afternoon.
>
> --
> Rob Nicholas
> Vice President, Development
> Municipal & Commercial Business
> VEOLIA NORTH AMERICA
>
> tel
>
> +1 859 582 0104

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[http://www.vesnaus.com/forms/SocialIcons/veolialogo_300_2.jpg]<http://www.veolianorthamerica.com/>
[http://www.vesnaus.com/forms/SocialIcons/twitter_14.gif]<https://twitter.com/veolia_na>
[http://www.vesnaus.com/forms/SocialIcons/linkedin_14.gif]
<https://www.linkedin.com/company/veolianorthamerica> [http://www.vesnaus.com/forms/SocialIcons/YouTube-social-square_red_14px.gif]
<http://www.youtube.com/user/VeoliaNorthAmerica>

Confidentiality Note: This e-mail message and any attachments to it are intended only for the named recipients and may contain legally priviledged and/or confidential information. If you are not one of the intended recipients, please do not duplicae or forward this e-mail message and immediately delete it from your computer.

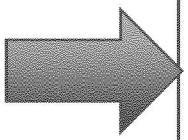
City of Flint, MI
City Council Public Works Committee

Interim Water Quality Report

Veolia Scope of Work

Week 1

- Provide a review of current actions
- Engage staff, visit facilities and analyze data
- Make interim report



Week 2

- Carry out more detailed study of initial findings
- Make recommendations for Improving water quality
- Provide a plan, cost and schedule for change

Items of Note

- **Not in scope** – studying why the change from DWSD or the history of the utility
- **What we found** – A very frustrated community and a staff trying to solve the problem, having some success but frustrated with the pace of change

Everybody Is Checking the Safety of Water

- City, state, news media, universities and other groups
- Safe = compliance with state and federal standards and required testing
  - *Latest tests show water is in compliance with drinking water standards*
  - *Monthly report available on web page*
- More than 20,000 tests required annually for city
- Strict testing requirements in place (what and how to test)

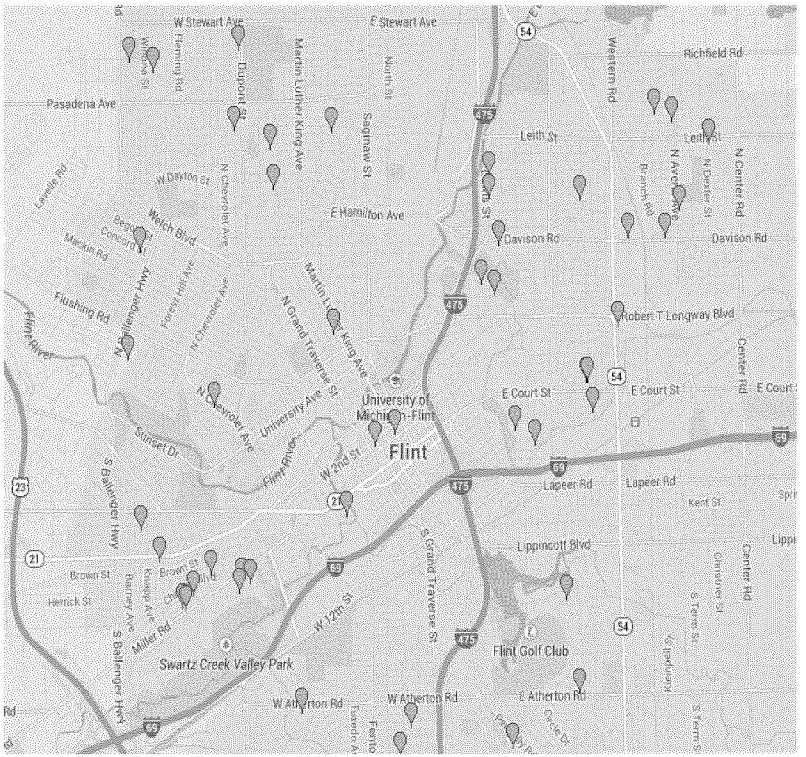
Why TTHM Notices?

- TTHM is formed as a result of the reaction between chlorine and organic material in the water
- City is required to test quarterly at 8 sites
  - *Last summer, several sites had more TTHM than allowed*
- City has reduced levels of TTHM and now all sites are in compliance
  - *Customer notification letters are required until tests are in compliance an average of four quarters*
- It will take at least 2 more quarters to lower average
  - *Even a change to DWSD water doesn't solve problem*
- Flint is not alone – hundreds of communities are facing TTHM issues

Why Discolored Water?

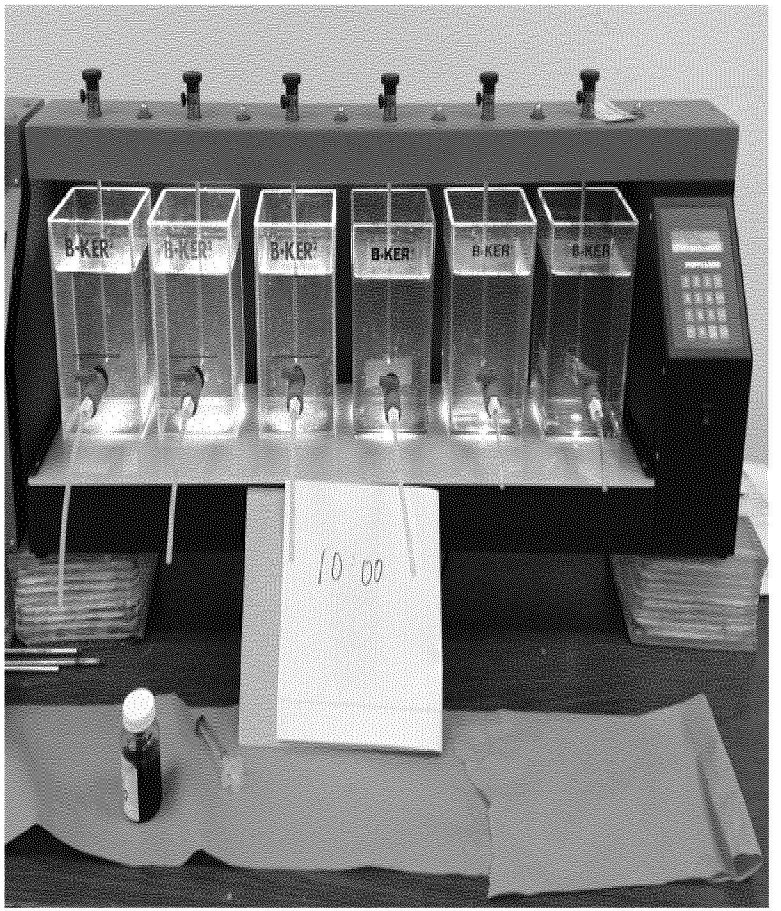
- Old cast iron pipes
- Always has been some discolored water problems – mostly after water breaks
- Efforts to reducing TTHM didn't help discoloration
  - *Doesn't mean the water is unsafe but it is not appealing and raises questions*
- City will test the water at your home – call 787-6537 or email flintwater@cityofflint.com
- Tracking customer complaints is important

Location of water quality complaints
The last 12 months – fewer than you think



Water Quality Can Be Improved

- Adjust the chemicals being fed – stop some, increase some and change some
- Provide better monitoring of water quality to help make adjustments
- Continue repair or replacement of broken parts
- Reduce the over capacity of the distribution system
- Do a better job explaining what is happening
- Do a better job of asking for help



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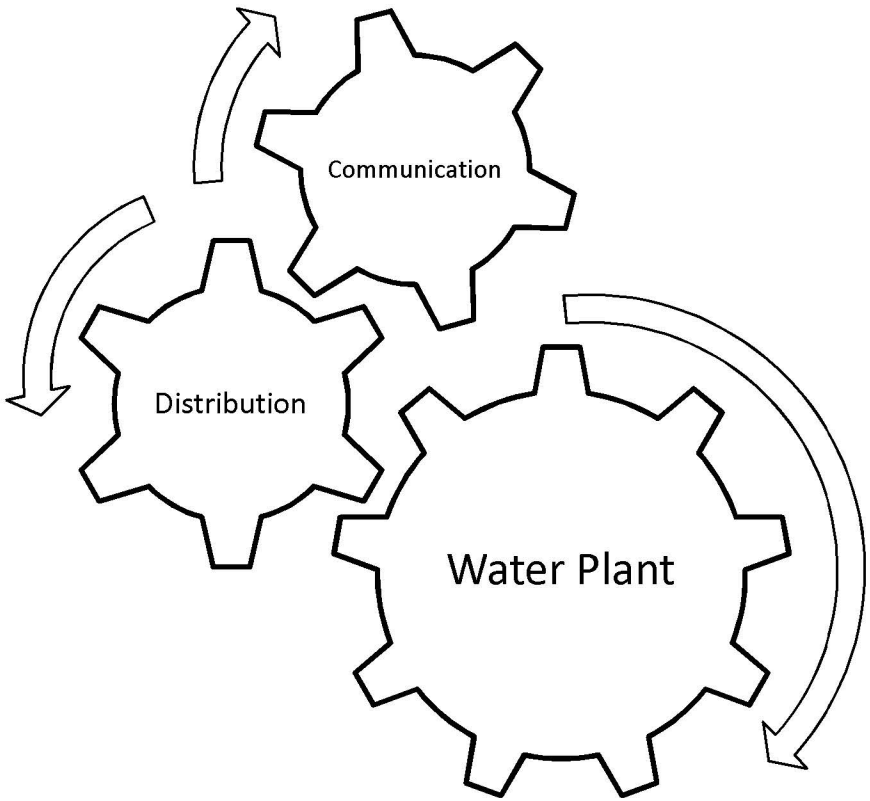
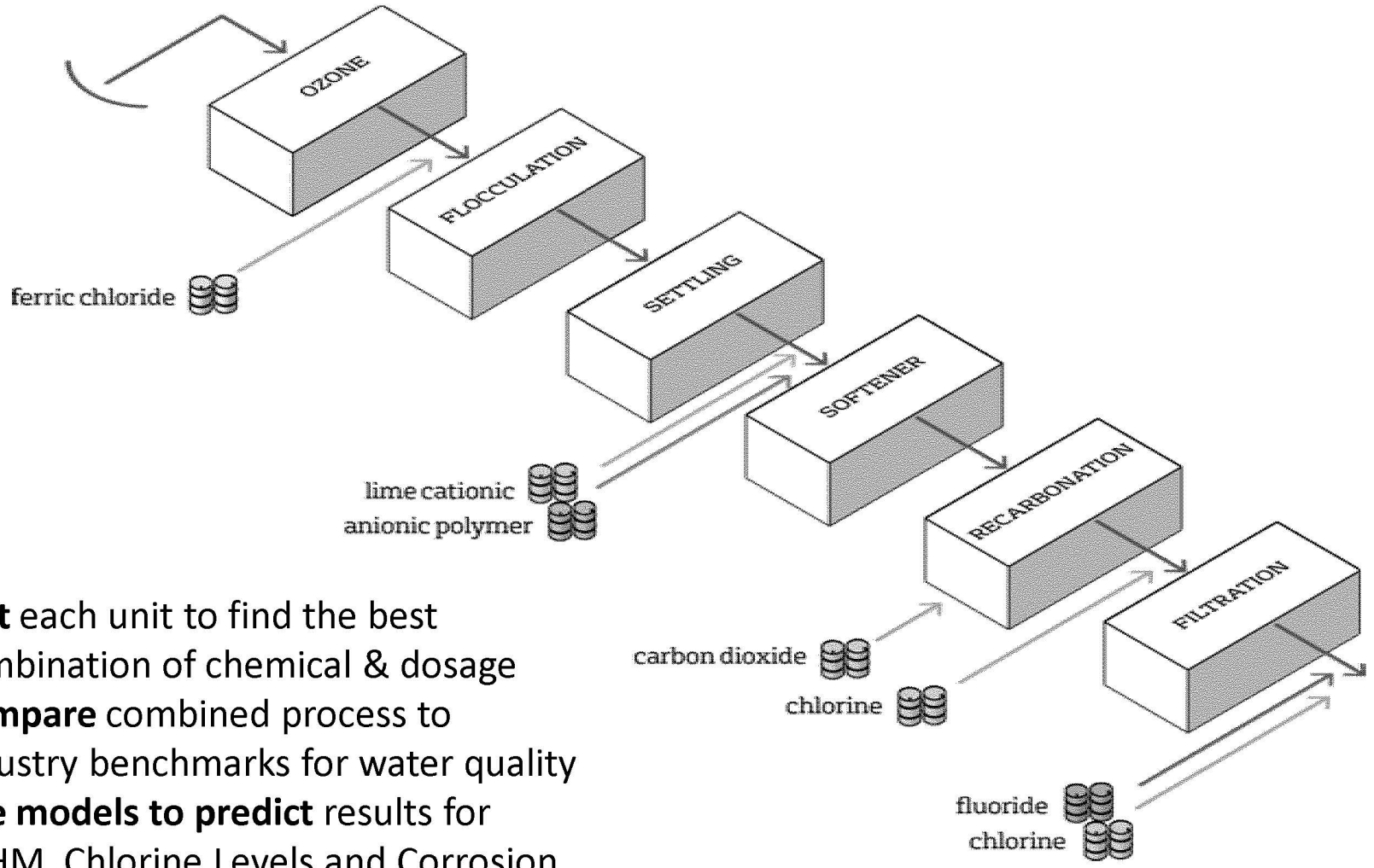
Solution Involves Coordination of 3 Activities



- Water plant improvements
  - *Optimize chemical dosages*
  - *Consider different chemicals*
  - *Change dosing points*
  - *Install granulated activated carbon*
  - *Complete plant upgrades*
  - *Implement best mgt practices*
- Distribution system improvements
  - *Fix broken valves*
  - *Ask for customer feedback*
  - *Reduce tank storage*
  - *Target line flushing*
  - *Run a hydraulic model*
- Better communication with customers
  - *Engage advisory committees*
  - *More accessible utility*
  - *Make it easy to access information*
  - *Better customer communication*

Optimize Plant Processes



- **Test** each unit to find the best combination of chemical & dosage
- **Compare** combined process to industry benchmarks for water quality
- **Use models to predict** results for TTHM, Chlorine Levels and Corrosion

Complete Plant Construction & Re Prioritize Capital

Cost effective plan in budget

- Complete water plant renovation
  - *Target SCADA and instrumentation in plant*
- Speed up valve turning contract & provide money for replacements
- Speed up hydraulic model update to reduce tank volume
- Evaluate installing of granulated activated carbon on filters

Weather can impact timing

Digging up a water valve for repair
Need good weather to start

Implement Best Management Practices

<u>Activities to Help Operators Maintain Good Water Quality</u>

- Process Control Management Plan
- Lab QA/QC Program
- Computerized Maintenance Management System
- Asset Management System
- Training and Certification Program
- Vulnerability Plan

Distribution System Improvements

- Speed up flow of water from plant to homes – 2 weeks plant to house
  - *Find closed valves & open them*
  - *Replace broken valves*
  - *Update hydraulic model*
  - *Reduce system storage*
- Track customer complaints
  - *Test customer water*
  - *Spot flush hydrants to clean areas of stagnant water in the system*

Flushing out discolored water

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Make It Easy to Access Information and People

Develop a proactive customer communication plan

- Create advisory committees to help direct efforts and improve flow of information
- Establish a single point of contact to manage all water quality complaints
- Provide additional customer service training to staff
- Expand neighborhood and community outreach
- Change monthly billing statements from card to envelope with information

Example - Communicate in the field

NOTICE: ANNUAL FLUSHING PROGRAM

We are conducting our annual flushing program to enhance your water quality and clean the distribution system.

DC Water crews will be flushing hydrants in your area 10:00 p.m. to 6:30 a.m. on the following dates:

9/24 **through** 9/30

IMPORTANT INFORMATION

- Your water supply will not be shut off during hydrant flushing.
- You may notice slight water discoloration or low water pressure.
- During this time, customers can continue normal water usage, including drinking, bathing and laundry (unless water is discolored).

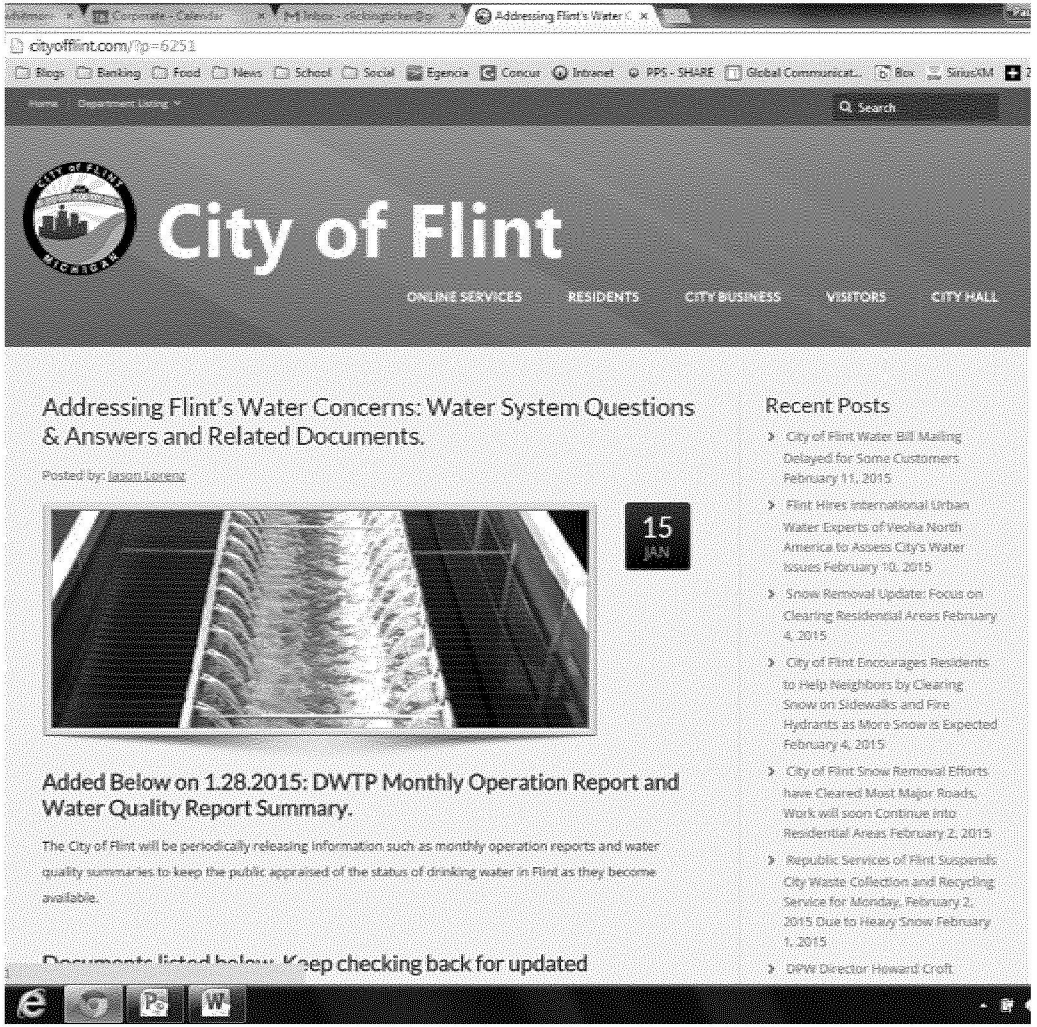
If you experience discolored water during this period:

- Run your cold water taps for 15 minutes. If it does not clear up, please contact our Drinking Water Division.
- Do not run your hot water. If you experience discolored water from your hot water tap for several hours, then it is recommended to drain and flush your water heater tank.

- **Provide field crews with additional communications tools to use to address questions or concerns from the public**
  - ***Create door hangers, flyers, or yard signs to notify neighborhoods about main breaks, hydrant flushing, or system maintenance that may affect the public***
  - ***Create a business card or other contact card with the name and phone number of the single point of contact with the Department of Public Works who is managing information flow***

sample door hanger provided by DC Water & Sewer Authority

Clear, concise information is key



Simplify the reports on the web page dedicated to addressing water system questions

- *Create a single-page, easy to understand report for the public*
- *Use charts or provide other examples to demonstrate water quality testing and system or treatment plant improvements underway*
- *Provide name, phone number and email address for identified point of contact so customers can request more information*
- *Continue to provide Monthly Operation Report and Water Quality Report Summary for those customers interested in more technical information*
- *Use site to provide additional notice of field work that may impact customers*

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Next Steps

Week 1

- Provide a review of current actions
- Engage staff, visit facilities and analyze data
- Make interim report

Week 2

- Carry out more detailed study of initial findings
- Make recommendations for Improving water quality
- Provide a plan, cost and schedule for change

Questions Being Heard

REMEMBER

We just started. Might not have an answer yet to your question

- **When will water improve -** The water has improved with current actions. More changes will occur over weeks and months because of safety reviews
- **Date of next update and final report** – An update will be provided next week and a report the following week.
- **Time frame for implementing recommendations –** The City is already started. Others a few days and some weeks or months due to State approval being required or weather.
- **Cost of changes** – Don't know yet but we are aware of the financial concerns

More Questions Being Heard

- **How are TTHM formed** – It's the reaction of chlorine to organics (leafs, dirt) in the water.
- **How to reduce TTHM** – Reduce organics before introducing chlorine and shorten time chlorine has to react with the organics
- **What causes discoloration** – Older lines, the iron parts of the system will leach iron into the water causing the discoloration. Other times its just air built up.
- **Why no discoloration with DWSD** – There was. Flint had a bad time with breaks of old line and is doing lots of construction. This stirred up the water and caused discoloration.

More Questions Being Heard

- **Can you test my water** – The city will test your water for free. But, only 2 of 20 people have taken the city up on the offer since it began offering the service.
- **Medical problems** – Some people may be sensitive to any water. Talk to your doctor. The City is communicating with the medical community.
- **Confidence that future problems will be avoided** – Recommendations will include putting programs in place to better respond to water changes and assure quality

VEOLIA

From:	Wyant, Dan (DEQ)
Sent:	Monday, September 28, 2015 7:18 AM
To:	Muchmore, Dennis (GOV); Lyon, Nick (DCH); Hollins, Harvey (GOV)
Cc:	Wurfel, Sara (GOV); Wurfel, Sara (GOV); Lasher, Geralyn (DCH); Thelen, Mary Beth (DEQ)
Subject:	Proposed Press Conference on Flint Drinking Water

Per the ongoing issues in Flint concerning their drinking water, I would offer the following recommendations. Let's discuss.

Recommendation

Press Conference in Flint – Wednesday, Thursday or Friday.

Participants

Mayor of Flint
Dan Wyant – Michigan Department of Environmental Quality
Nick Lyon – Department of Community Health
Susan Hedman – Region 5 Administrator or EPA
Harvey Hollins – Governor's office
Local Public Health Department

Announcement

Federal – State – Local action plan to address Flint Drinking Water

1. Governor Snyder names Dr. Dean Sienko as Flint drinking water Public Health Advisor.
2. All Flint schools water will immediately be tested to ensure that drinking water is safe.
3. Advisories will be disseminated recommending citizens flush your cold water pipes, use only water from the cold water tap for drinking, cooking and especially for making baby formula.
4. Implementation of fully optimized corrosion controls in the Flint drinking water system.
5. Expanded water testing of at risk properties.
6. Offer water testing at no cost to Flint residents to assure water is safe.
7. Convene a safe drinking water " Technical Review Advisory" to ensure best technology, practices and science is being utilized, including EPA's expertise and assistance from their Office of Research and Development.
8. Offer bottled water and premixed formula if test results indicate high levels of lead.
9. Accelerate water system improvements to address replacement of lead service lines.

Dan Wyant, Director
Department of Environmental Quality
517-284-6700 (New Number)

From: Muchmore, Dennis (GOV)
Sent: Monday, September 28, 2015 9:01 AM
To: 'Khouri, Nick (TREASURY)'; Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: Flint

I know that I'm a broken record on this one, but I need some specific attention to Flint today. I need you all to reconstruct a timeline of events from the records we have relating to the Flint KWA DWSD controversy as it is becoming unwieldy. Please go back and review the Flint procedures and find the initial decision making process relating to the switchover. The first time I remember it is in 2012 (August I think) when the county started pitching the project at council. Then we instituted Mike Brown as EM and from there on it became to a certain extent our problem. However, if I remember right, this was a Flint idea from the start. Then, if you can trace the financial drivers of the decision to present day it would be important. I think for the most part the explanation you had in the distressed cities reports were helpful…my point being that this was an idea to help the city survive and without drastic changes it wouldn't have, KWA being one of them. We'll take any other ideas that you have.

From: Workman, Wayne (TREASURY)
Sent: Monday, September 28, 2015 9:15 AM
To: Muchmore, Dennis (GOV)
Cc: Khouri, Nick (TREASURY); Saxton, Thomas (Treasury)
Subject: Re: Flint

Follow Up Flag: Follow up
Flag Status: Completed

We will get going on this

Sent from my iPhone

On Sep 28, 2015, at 9:01 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

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From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Monday, September 28, 2015 11:45 AM
To: Muchmore, Dennis (GOV)
Subject: Letter to Governor Snyder: Flint Water
Attachments: 09.28.2015-Letter-Ananich-Snyder-Water-Requests.pdf

Hi Dennis,

Senator Ananich began drafting the attached letter on Sunday and thought it would be helpful to guide our 12pm call.

Thanks,

Andy

SENATE MINORITY LEADER
JIM ANANICH

517.373.0142
senjananich@senate.michigan.gov
senatedems.com/ananich

September 28, 2015

State of Michigan
Executive Office of the Governor
P.O. Box 30013
Lansing, MI 48909

Governor Snyder,

Access to safe, affordable drinking water is a basic necessity for every community. It is completely unacceptable that respected scientific experts and our trusted local physicians have verified that the City of Flint's drinking water is dangerous for our citizens, especially our most vulnerable young people.

As a result, I am formally requesting assistance as suggested by the experts on the frontline of this public health crisis. Here are the top priorities we should work together to address:

1. **Swift transfer to a safe source of water until the Karegnondi Water Authority (KWA) project is complete next year.** Your administration has the ability to ensure a financially acceptable and responsible contract between Flint and the Detroit Water and Sewerage Department, particularly in light of the public health implications with the Flint River supply.

2. **Equally urgent is the need for corrosion control as recommended by independent scientific experts.** There are chemical treatment additives that could help reduce this corrosion. I urge you to help the city implement anti-corrosion methods immediately. The current emergency makes the January timeline unacceptable.

3. **Filters and bottled water assistance.** Flint water touches the entire city. Whether it's a person's home, work, school, restaurant or place of worship, access to safe, clean drinking water should not be hindered. Water filters, used in conjunction with corrosion control methods, are necessary to help guard against toxic exposure.

   I have been working with the philanthropic community and private sector to secure donations to acquire filters and water; however, more funds will be necessary to effectively cover the thousands of residents impacted. I would like to formally request emergency funding to help supplement the acquisition of water filters and bottled water. Any and all appropriate state or federal money to help accomplish this feat should be considered.

SENATE MINORITY LEADER
JIM ANANICH

517.373.0142
senjananich@senate.michigan.gov
senatedems.com/ananich

4. **Support for completion of the KWA pipeline.** It is presumed that the upcoming KWA pipeline will solve a number of problems associated with the current sourcing of Flint's water from the Flint River. I am requesting a meeting between representatives from your office, KWA board members and project engineers to discuss any options to expedite the pipeline's construction.

5. **A long-term commitment to addressing outdated infrastructure.** A recent EPA report just outlined the billions of dollars necessary over the next several decades to adequately secure safe water for our entire state. You have the position and opportunity to be a national leader on moving the debate forward on this topic so that we can avoid the type of catastrophe my community is grappling with today.

I look forward to working with you to deliver on these concrete and urgent action items to alleviate the public health crisis facing our residents.

We jeopardize any progress and comeback for our cities and state if we cannot ensure safe, basic necessities for our families or if we cannot come together swiftly to fix an identified, severe threat to the safety of our people.

Sincerely,

Jim Ananich
Senate Democratic Leader
District 27

cc:
U.S. Representative Dan Kildee
Mayor Dayne Walling, City of Flint
Howard Croft, City of Flint
Susan Hedman, EPA
Thomas Poy, EPA
Michael Schock, EPA-ORD
Darren Lytle, EPA-ORD
Denise Fortin, EPA
Liane Shekter-Smith, MDEQ
Pat Cook, MDEQ
Stephen Busch, MDEQ
Brad Wurfel, MDEQ
Marc Edwards, Virginia Tech

From: Muchmore, Dennis (GOV)
Sent: Monday, September 28, 2015 12:36 PM
To: Khouri, Nick (TREASURY); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: FW: Letter to Governor Snyder: Flint Water
Attachments: 09.28.2015-Letter-Ananich-Snyder-Water-Requests.pdf

This is the latest set of requests. Jim is trying to work with us to find solutions.

From: Andrew Leavitt [mailto:ALeavitt@senate.michigan.gov]
Sent: Monday, September 28, 2015 11:45 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Letter to Governor Snyder: Flint Water

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Andy

SENATE MINORITY LEADER
JIM ANANICH

517.373.0142
senjananich@senate.michigan.gov
senatedems.com/ananich

September 28, 2015

State of Michigan
Executive Office of the Governor
P.O. Box 30013
Lansing, MI 48909

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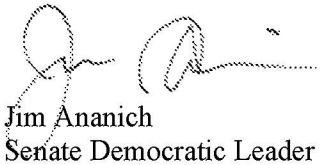
4. **Support for completion of the KWA pipeline.** It is presumed that the upcoming KWA pipeline will solve a number of problems associated with the current sourcing of Flint's water from the Flint River. I am requesting a meeting between representatives from your office, KWA board members and project engineers to discuss any options to expedite the pipeline's construction.

5. **A long-term commitment to addressing outdated infrastructure.** A recent EPA report just outlined the billions of dollars necessary over the next several decades to adequately secure safe water for our entire state. You have the position and opportunity to be a national leader on moving the debate forward on this topic so that we can avoid the type of catastrophe my community is grappling with today.

I look forward to working with you to deliver on these concrete and urgent action items to alleviate the public health crisis facing our residents.

We jeopardize any progress and comeback for our cities and state if we cannot ensure safe, basic necessities for our families or if we cannot come together swiftly to fix an identified, severe threat to the safety of our people.

Sincerely,



Jim Ananich
Senate Democratic Leader
District 27

cc:
U.S. Representative Dan Kildee
Mayor Dayne Walling, City of Flint
Howard Croft, City of Flint
Susan Hedman, EPA
Thomas Poy, EPA
Michael Schock, EPA-ORD
Darren Lytle, EPA-ORD
Denise Fortin, EPA
Liane Shekter-Smith, MDEQ
Pat Cook, MDEQ
Stephen Busch, MDEQ
Brad Wurfel, MDEQ
Marc Edwards, Virginia Tech

From: Muchmore, Dennis (GOV)
Sent: Monday, September 28, 2015 2:27 PM
To: Wyant, Dan (DEQ); Lyon, Nick (DCH); Hollins, Harvey (GOV)
Cc: Wurfel, Sara (GOV); Wurfel, Sara (GOV); Lasher, Geralyn (DCH); Thelen, Mary Beth (DEQ)
Subject: RE: Proposed Press Conference on Flint Drinking Water

Thank you, you're always ahead of us. I don't have any reservations about the PC, although as I mentioned I don't see any reason to have Mr. Sienko, as we have a top notch professional in Eden Wells and certainly Tim and Geralyn if need be.

From: Wyant, Dan (DEQ)
Sent: Monday, September 28, 2015 7:18 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Lyon, Nick (DCH) <LyonN2@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Cc: Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Wurfel, Sara (GOV) <Wurfels@michigan.gov>; Lasher, Geralyn (DCH) <lasherg@michigan.gov>; Thelen, Mary Beth (DEQ) <THELENM2@michigan.gov>
Subject: Proposed Press Conference on Flint Drinking Water

Per the ongoing issues in Flint concerning their drinking water, I would offer the following recommendations. Let's discuss.

Recommendation

Press Conference in Flint – Wednesday, Thursday or Friday.

Participants

Mayor of Flint
Dan Wyant – Michigan Department of Environmental Quality
Nick Lyon – Department of Community Health
Susan Hedman – Region 5 Administrator or EPA
Harvey Hollins – Governor's office
Local Public Health Department

Announcement

Federal – State – Local action plan to address Flint Drinking Water

1. Governor Snyder names Dr. Dean Sienko as Flint drinking water Public Health Advisor.
2. All Flint schools water will immediately be tested to ensure that drinking water is safe.
3. Advisories will be disseminated recommending citizens flush your cold water pipes, use only water from the cold water tap for drinking, cooking and especially for making baby formula.
4. Implementation of fully optimized corrosion controls in the Flint drinking water system.

5. Expanded water testing of at risk properties.

6. Offer water testing at no cost to Flint residents to assure water is safe.

7. Convene a safe drinking water " Technical Review Advisory" to ensure best technology, practices and science is being utilized, including EPA's expertise and assistance from their Office of Research and Development.

8. Offer bottled water and premixed formula if test results indicate high levels of lead.

9. Accelerate water system improvements to address replacement of lead service lines.

Dan Wyant, Director
Department of Environmental Quality
517-284-6700 (New Number)

From: Muchmore, Dennis (GOV)
Sent: Monday, September 28, 2015 2:53 PM
To: [redacted]
Subject: Health Endowment Fund

Getting a great deal of pressure to go to HEF for a contribution to buy water filters in Flint. I expect that this will build.

From: Paul Hillegonds [redacted]
Sent: Tuesday, September 29, 2015 4:21 PM
To: Muchmore, Dennis (GOV)
Subject: RE: Health Endowment Fund

Dennis,

I spoke today with Jamie Gaskin, United Way of Genesee County. He is working with the Community Foundation of Flint and reported that the Community Foundation will be applying to us for a grant to help fund the purchase of Flint water filters. Please give me a call when you have a chance, and I can provide more details.

Thanks,

Paul

From: Muchmore, Dennis (GOV) [mailto:muchmored@michigan.gov]
Sent: Monday, September 28, 2015 2:53 PM
To: [redacted]
Subject: Health Endowment Fund

Getting a great deal of pressure to go to HEF for a contribution to buy water filters in Flint. I expect that this will build.

From: Pallone, Maggie (DEQ)
Sent: Tuesday, September 29, 2015 4:47 PM
To: Wurfel, Brad (DEQ); Wyant, Dan (DEQ); Tommasulo, Karen (DEQ); Lyon, Nick (DCH); Hertel, Elizabeth (DCH); Lasher, Geralyn (DCH); Muchmore, Dennis (GOV)
Subject: FW: Flint Water

FYI, I asked Scott for more details. We also got a call from Senate Fiscal asking about emergency funds within DEQ.

From: Starr, Scott (DTMB)
Sent: Tuesday, September 29, 2015 4:44 PM
To: Pallone, Maggie (DEQ) <PalloneM@michigan.gov>; Howes, Sarah (DEQ) <HowesS1@michigan.gov>
Subject: Flint Water

Good afternoon,

Hearing a rumor that Sen. Ananich might be trying to add money for the Flint water issue in the FY 15 supplemental that's up in Senate Appopriations tomorrow. Just thought I'd check in and see if either or you have heard anything on this.

From: Hollins, Harvey (GOV)
Sent: Tuesday, September 29, 2015 5:28 PM
To: Muchmore, Dennis (GOV)
Subject: Filter Conversation

Today, I had a conference call with Andy Levit, Amy Hovey, Rep. Phelps and Rep. Neeley. The objective was to coordinate the acquisition and distribution of water filters for Flint residents.

>>>List of Potential Donors

Flint Community Foundation	10,000 filter request in the Health Endowment Fund Request
Meijer	Donated 1500
HomeDepot	Rich Baird to follow up
Ice Mountain	Stacie and Andy Levit have reached out to no avail
Absopure	Stacie and Andy Levit have reached out to no avail
GM	5,000-10,000 water filters via the United Way
Dow	Considering Funding through its Foundation
Coca Cola	Bottled water
UAW Region 1	Bottled water
Cindy Estrada, UAW VP	$10,000 towards the purchase of water filters
Norman Jewel, UAW	Funding
Walmart	Funding through its Foundation
McClaren Hospital	Funding
Consumers Energy	Funding
Absopure	Donating filters
Ice Mountain	Donating filters
Similac	Baby Formula
Rite Aid & Walgreens	Possible Donors

>>>DISTRIBUTION

*County Health will track distribution in coordination with Red Cross

*Request that the state provide a coordinator on the ground in Flint.

>>>ANCILLARY DISCUSSION

*Phelps said nothing on the call

*Neeley wanted to talk about the switch back to the Great Lakes Authority

*Amy asked if the Governor will declare a state of emergency in order to draw down on FEMA dollars. I indicated that we are not at the stage yet, that we should allow the experts to determine if whether an emergency exists, and in the meantime take appropriate steps to provide some relief to the residents in Flint.

Best,
Harvey Hollins III, Director
Governor's Office of Urban Initiatives

313.456.4994 (office)
[redacted] (Cell)

From: Muchmore, Dennis (GOV)
Sent: Wednesday, September 30, 2015 9:06 AM
To: Hollins, Harvey (GOV)
Subject: RE: Filter Conversation

I think the deal is set for the Foundation to get $250,000 to $300,000 from the Health Endowment Fund if they follow through with the amendment. Those jerks from Progress Michigan (what a joke that they use that name) criticized us for helping the ministers with the filters.

From: Hollins, Harvey (GOV)
Sent: Tuesday, September 29, 2015 5:28 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Filter Conversation

Today, I had a conference call with Andy Levit, Amy Hovey, Rep. Phelps and Rep. Neeley. The objective was to coordinate the acquisition and distribution of water filters for Flint residents.

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Harvey Hollins III, Director
Governor's Office of Urban Initiatives

313.456.4994 (office)
[redacted](Cell)

-

From: Muchmore, Dennis (GOV)
Sent: Wednesday, September 30, 2015 4:33 PM
To: Wyant, Dan (DEQ)
Subject: Flint

Are you familiar with a fund called the "Environmental Protection Fund" that you have a $1.5M balance in? Can we use that as a source? Ananich wants to put a supplemental amendment in to use that and to look at attaching it for water filters.

From: Dayne Walling <dwalling@cityofflint.com>
Sent: Thursday, October 01, 2015 10:47 AM
To: Muchmore, Dennis (GOV)
Subject: Flint and Detroit

COS, thanks for your team's engagement with the Flint water problems. I have been in frequent contact with DEQ Director Wyant. I do want to speak with you directly today about the Detroit water option. Please call me on my cell [redacted] and if easier the office number is below and our offices can secure a time.
Thanks, Dayne
--
Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 01, 2015 4:32 PM
To: Khouri, Nick (TREASURY); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: FW: Flint

Follow Up Flag: Follow up
Flag Status: Completed

Tom-
Need your immediate help.

Natasha has the proposal back from DWSD for a reconnect:

1. Short term reconnect is ok until KWA starts operating;
2. No reconnect fee and immediate reconnect;
3. Expenses incurred at actual cost although no estimate at this time
4. A fixed monthly rate of $662,100 + a commodity rate of $8.93mcf for current 15-16 FY;
5. Rate is over and above water sales to Genesee County Drain Commission;
6. A water wholesale adjustment;
7. Only extends to Flint;
8. Rates for 16-17 FY would be the same as other customers.

Mayor Duggan is more than willing to lend his support.

I'm asking you for a ballpark calculation. We would have to find them the money for this reconnect, but Dayne is more than open (as is Ananich to a lesser degree) to finding some revolving fund that they would repay perhaps on an extended basis or maybe using some guarantee to reduce the borrowing costs.

From: Saxton, Thomas (Treasury)
Sent: Thursday, October 01, 2015 4:40 PM
To: Muchmore, Dennis (GOV); Khouri, Nick (TREASURY); Workman, Wayne (TREASURY)
Subject: RE: Flint

Follow Up Flag: Follow up
Flag Status: Completed

Let me check to see if I can get someone to do a quick calculation

---

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 01, 2015 4:32 PM
To: Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Subject: FW: Flint

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From: Muchmore, Dennis (GOV)
Sent: Thursday, October 01, 2015 5:10 PM
To: 'Andrew Leavitt'
Subject: RE: Progress Michigan

Are you happier with me now?

From: Andrew Leavitt [mailto:ALeavitt@senate.michigan.gov]
Sent: Wednesday, September 30, 2015 9:25 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Re: Progress Michigan

I don't know what they said so I can't speak to denouncing them. But everyday of inaction compounds the politics of this issue. We have secured around 30 thousand dollars for a filter program from several UAW VPs as well as 50k from GM. We are still waiting on a state emergency professional to help our community react professionally and promptly. The only person I have heard from since Monday's call is Director Wyatt and he has been asking good questions and seems like he recognizes a problem and wants solutions.

I say all that to say, we are happy to quiet critics and we think the best way to do that is progress. I feel like we offered several easy steps last week that would have shown prompt action and none of that has been realized. Further, we have seen DHHS working to discredit the pediatricians in our community rather than work to help the most vulnerable.

I would prefer you and I talk about this daily so we are working together but I have called you and Beth each twice with no return. I know we are all busy but I hope you will agree that more communication during,what we view as a crisis, is the best way to keep us moving forward together.

Sent from my iPhone

On Sep 30, 2015, at 9:09 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> I assume these jerks don't represent the Minority Leader but it would be nice to see a public denunciation of them from him. I'm sure they didn't volunteer any help to the Flint people or put any effort into alleviating the difficulties the city finds itself in since they never do anything positive.

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Thursday, October 01, 2015 5:26 PM
To: Muchmore, Dennis (GOV)
Subject: Re: Progress Michigan

You moving back into our good graces. :)

A little concerned a press event is planned and scheduled without Jim having any idea what is going to take place other than what you indicated as a filter voucher program. Maggie from DEQ just emailed so I will call her and see if she has any details.

From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Date: Thursday, October 1, 2015 at 5:10 PM
To: Andy Leavitt <aleavitt@senate.michigan.gov>
Subject: RE: Progress Michigan

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From: Workman, Wayne (TREASURY)
Sent: Thursday, October 01, 2015 6:37 PM
To: Muchmore, Dennis (GOV)
Cc: Khouri, Nick (TREASURY); Saxton, Thomas (Treasury)
Subject: Re: Flint

Follow Up Flag: Follow up
Flag Status: Completed

This will add to the $14, million deficit. We believe they may run out cash quite soon and have asked for a cash flow projection

Sent from my iPhone

On Oct 1, 2015, at 4:32 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> Tom-
> Need your immediate help.
>
> Natasha has the proposal back from DWSD for a reconnect:
> 1. Short term reconnect is ok until KWA starts operating;
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> Mayor Duggan is more than willing to lend his support.
>
> I'm asking you for a ballpark calculation. We would have to find them the money for this reconnect, but Dayne is more than open (as is Ananich to a lesser degree) to finding some revolving fund that they would repay perhaps on an extended basis or maybe using some guarantee to reduce the borrowing costs.

From: Workman, Wayne (TREASURY)
Sent: Thursday, October 01, 2015 6:38 PM
To: Saxton, Thomas (Treasury)
Cc: Muchmore, Dennis (GOV); Khouri, Nick (TREASURY)
Subject: Re: Flint

Follow Up Flag: Follow up
Flag Status: Completed

Flint has to provide usage info or we just have a SWAG

Sent from my iPhone

On Oct 1, 2015, at 4:39 PM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov> wrote:

> Let me check to see if I can get someone to do a quick calculation
>
> ---
>
> **From:** Muchmore, Dennis (GOV)
> **Sent:** Thursday, October 01, 2015 4:32 PM
> **To:** Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
> **Subject:** FW: Flint
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From: Muchmore, Dennis (GOV)
Sent: Friday, October 02, 2015 9:39 AM
To: Andrew Leavitt
Subject: Re: Progress Michigan

Dan and Nick are calling Jim to lay out the strategy for him. I assume that's already happened. They would like to include Jim, but you may want to maintain a little distance until you're confident its moving the way you want.

On Oct 1, 2015, at 5:26 PM, Andrew Leavitt <ALeavitt@senate.michigan.gov> wrote:

> You moving back into our good graces. :)
>
> A little concerned a press event is planned and scheduled without Jim having any idea what is going to take place other than what you indicated as a filter voucher program. Maggie from DEQ just emailed so I will call her and see if she has any details.
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From: Muchmore, Dennis (GOV)
Sent: Friday, October 02, 2015 10:33 AM
To: Saxton, Thomas (Treasury)
Subject: Flint

If the ballpark is $11M, and we decide to reconnect, can you think of any other reason not to do so? Can you think of any other costs that might pop up.

From: Saxton, Thomas (Treasury)
Sent: Friday, October 02, 2015 11:48 AM
To: Muchmore, Dennis (GOV)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Flint

Probably not (in terms of a reason not to)... it is not clear to me that you will have an immediate fix on the water issues (e.g., coloring, lead, etc).

You will have issues/costs in standing down the water plant & costs when switching to KWA. We haven't seen those estimates.

We are in this fix in part because DWSD had kicked the City off their system so I am not sure I have a ton of confidence in their numbers or deal. Hopefully as you are saying there are no hidden costs.

And we need to figure out how best to pay for it.

-----Original Message-----
From: Muchmore, Dennis (GOV)
Sent: Friday, October 02, 2015 10:33 AM
To: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>
Subject: Flint

If the ballpark is $11M, and we decide to reconnect, can you think of any other reason not to do so? Can you think of any other costs that might pop up.

From: Muchmore, Dennis (GOV)
Sent: Friday, October 02, 2015 3:11 PM
To: Wyant, Dan (DEQ)
Subject: RE: Ananich, Neely, Kildee

THx

-----Original Message-----
From: Wyant, Dan (DEQ)
Sent: Friday, October 2, 2015 12:08 PM
To: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Wyant, Dan (DEQ) <WyantD@michigan.gov>; Lyon, Nick (DHHS) <LyonN2@michigan.gov>
Cc: Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Mcbride, Bill (GOV) <mcbrideb@michigan.gov>; Thelen, Mary Beth (DEQ) <THELENM2@michigan.gov>
Subject: RE: Ananich, Neely, Kildee

Yes, all were briefed at 10:30 this morning.
Neeley and Phelps will be at the press conference - the others will not be there.

Thanks.

Mary Beth (on Dan Wyant's email)

Mary Beth Thelen
Management Assistant to Director Dan Wyant Department of Environmental Quality Constitution Hall, 6th Floor South
Phone: 517-284-6712 or 284-6700 (new numbers)
Fax: 517-241-7401
Thelenm2@michigan.gov

-----Original Message-----
From: Posthumus, Dick (GOV)
Sent: Friday, October 02, 2015 11:04 AM
To: Muchmore, Dennis (GOV); Wyant, Dan (DEQ); Lyon, Nick (DHHS)
Cc: Hollins, Harvey (GOV); Mcbride, Bill (GOV)
Subject: RE: Ananich, Neely, Kildee

I don't want to assume anything. But have the legislators been briefed and asked to be at the press conference in Flint?
Dick

-----Original Message-----
From: Muchmore, Dennis (GOV)
Sent: Friday, October 02, 2015 10:32 AM
To: Wyant, Dan (DEQ) <WyantD@michigan.gov>; Lyon, Nick (DHHS) <LyonN2@michigan.gov>
Cc: Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Posthumus, Dick (GOV) <Posthumusd@michigan.gov>; Mcbride, Bill (GOV) <mcbrideb@michigan.gov>
Subject: Ananich, Neely, Kildee

Were you able to connect and brief these guys?

From: Muchmore, Dennis (GOV)
Sent: Monday, October 05, 2015 11:23 AM
To: Hollins, Harvey (GOV); Wyant, Dan (DEQ); Lyon, Nick (DHHS)
Subject: Flint

How are we protecting the citizens of Flint from profiteers selling water filters?
How do we get the filters installed for the elderly and the poor, or frankly for any citizen who doesn't have the means or ability to install one?

From: Paul Hillegonds[redacted]
Sent: Tuesday, October 06, 2015 2:26 PM
To: Muchmore, Dennis (GOV)
Subject: Flint Water Filters

Dennis,

Just an update. Health Endowment Fund board members have unanimously indicated that they will be approving the Flint Community Foundation's request of $250,000 for the purchase of water filters. We have sent a letter of intent to the community foundation and United Way of Genesee County. Our letter will enable the community foundation to release funds for water filters with the assurance that we will be making a $250,000 grant later this year.

Paul

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 06, 2015 3:46 PM
To: Wyant, Dan (DEQ); Lyon, Nick (DHHS); Hollins, Harvey (GOV)
Subject: Fwd: Flint Water Filters

fyi

Begin forwarded message:

> **From:** Paul Hillegonds[redacted]
> **Date:** October 6, 2015 at 2:26:01 PM EDT
> **To:** "Dennis Muchmore " <muchmored@michigan.gov>
> **Subject: Flint Water Filters**
>
> Dennis,
>
> Just an update. Health Endowment Fund board members have unanimously indicated that they will be approving the Flint Community Foundation's request of $250,000 for the purchase of water filters. We have sent a letter of intent to the community foundation and United Way of Genesee County. Our letter will enable the community foundation to release funds for water filters with the assurance that we will be making a $250,000 grant later this year.
>
> Paul

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 07, 2015 11:48 AM
To: 'Utley, Corey (GOV)'; Posthumus, Dick (GOV); Hollins, Harvey (GOV); Baird, Richard (GOV)
Cc: Agen, Jarrod (GOV); Heaton, Anna (GOV)
Subject: RE: Flint Press Conference

I think the Drain Commissioner, Ananich, Neely, Phelps, and the two ministers who were leading the effort, Pastors Overton and Harris?

From: Utley, Corey (GOV)
Sent: Wednesday, October 7, 2015 10:08 AM
To: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>
Cc: Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Heaton, Anna (GOV) <HeatonA@michigan.gov>
Subject: Flint Press Conference

Hi All:

Anna and I are working on an invite list for the press conference in Flint tomorrow. The venue we've selected will hold approximately 20 guests (not including speakers).

Dick: Do we need to invite any legislators and, if so, who? If you provide names, I can work with Laurie to reach out. We want to make clear that if they are invited as guests, not speaking participants.

Dennis, Rich, Harvey: Aside from legislators, are there other folks that have to be invited? Again, keeping in mind the limited space capacity.

We'd like to get the list compiled by 2 PM, then reach out later today.

Thank you!
Corey

From: Duncan, Nancy (DTMB)
Sent: Wednesday, October 07, 2015 12:14 PM
To: Wyant, Dan (DEQ); Khouri, Nick (TREASURY); Saxton, Thomas (Treasury); Becker, Timothy (DHHS); Lyon, Nick (DHHS); Zimmer, Mike (LARA); Muchmore, Dennis (GOV)
Cc: Pohl, Allan (LARA); Hanley, Farah (DHHS); McNeely, Jacques (DTMB); Harkins, Chris (DTMB); Fosdick, David (DTMB); Kimmith, Dean (DTMB); Shoemaker, Lisa (DTMB); Harrison, Jennifer (DTMB); Roberts, John (DTMB); Starr, Scott (DTMB); Peruchietti, Cindy (Treasury); Epkey, Amy (DEQ)
Subject: DRAFT City of Flint Solution
Attachments: City of Flint Water Funding Solution.pdf

Importance: High

Colleagues,

Please find attached summary of where the State Budget Office believes we are based on this morning's meeting hosted by Director Wyant. This reflects the State commitment of resources towards provision of filters, reconnecting to Detroit Water & Sewage, and home/school/other inspections. Your quick review would be appreciated, since the Governor wants to share with legislative leaders yet today. I have included your budget officers to assist in the review.

Open issues are: (1) where to place the appropriation for the Flint re-connect and (2) whether (and what) boilerplate we may need/want.

Thanks.

Nancy Duncan
Deputy State Budget Director
517-373-0870

City of Flint Water - Funding Solution
State of Michigan Commitment

Agency	GF/GP	Gross	Comments
Filters:			
MSHDA		$225,000	Does not require board approval.
Health & Human Services	$1,016,000	$1,016,000	Towards 2nd round of filters. (AY15 work project)
Health & Human Services	$0	$1,000,000	Environmental Quality - State Restricted Settlement Funds provided to HHS Emergency Services local office for 1st round of filters.
Subtotal Filters:	**$1,016,000**	**$2,241,000**	
Reconnect to DSW:			
Environmental Quality	$0	$1,000,000	State Restricted Settlement Fund support.
Health & Human Services	$0	$0	
MI Strategic Fund	$0	TBD	
State Budget Office	$5,000,000	$5,000,000	FY15 general fund lapse resources.
Subtotal Reconnect:	**$5,000,000**	**$6,000,000**	
Additional Agency Support:			
LARA	TBD	TBD	Provision of 5-7 plumbing inspectors to do schools (public and parochial) and health facilities (hospitals, Long Term Care, etc.).
Health & Human Services	TBD	TBD	Provision for home and school inspections. Cost will be absorbed within existing resources.
Environmental Quality	TBD	TBD	Provision of 2 FTEs for home and school inspections. Cost will be absorbed within existing resources.
Subtotal Additional Support:	**$0**	**$0**	
ALL TOTAL	**$6,016,000**	**$8,241,000**	

12:12 PM
10/7/2015

From: Pohl, Allan (LARA)
Sent: Wednesday, October 07, 2015 12:58 PM
To: Duncan, Nancy (DTMB)
Cc: Wyant, Dan (DEQ); Khouri, Nick (TREASURY); Saxton, Thomas (Treasury); Becker, Timothy (DHHS); Lyon, Nick (DHHS); Zimmer, Mike (LARA); Muchmore, Dennis (GOV); Hanley, Farah (DHHS); McNeely, Jacques (DTMB); Harkins, Chris (DTMB); Fosdick, David (DTMB); Kimmith, Dean (DTMB); Shoemaker, Lisa (DTMB); Harrison, Jennifer (DTMB); Roberts, John (DTMB); Starr, Scott (DTMB); Peruchietti, Cindy (Treasury); Epkey, Amy (DEQ)
Subject: Re: DRAFT City of Flint Solution

Hi Nancy, I discussed with Lisa earlier this morning that we are asking for $200,000 Gross in a contingency fund transfer with Construction Code found revenue as the source.

Thanks

Sent from my iPad

On Oct 7, 2015, at 12:14 PM, Duncan, Nancy (DTMB) <duncann1@michigan.gov> wrote:

> Colleagues,
>
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>
> Nancy Duncan
> Deputy State Budget Director
> 517-373-0870
>
> <City of Flint Water Funding Solution.pdf>

From: Muchmore, Dennis (GOV)
Sent: Wednesday, February 04, 2015 4:53 PM
To: Saxton, Thomas (Treasury)
Subject: Flint Meeting

So, just so I understand, the rates went up from the Detroit rates when they went to the Flint River? If that is true I'd be pissed also. We probably need an accounting of this water issue. Costs to date, old rate v. today's rate, any new hook charges, etc.

In a discussion about this with Rich, he recited a conversation with Daddow in which Daddow said that the $847,000 a month is a reduction from their previous rate. Daddow had no objection to a shorter term fix as it would mitigate some of the costs that were to be added to the water charges at GLWA for present customers for a year and a half which Bob seemed to think made sense.

I asked him to review with Daddow this whole thing and see if they could be rehooked for 15 months or so.

Dennis C. Muchmore
Chief of Staff
Governor Rick Snyder, Michigan
517-241-5601

STAY CONNECTED:

From: Muchmore, Dennis (GOV)
Sent: Wednesday, February 04, 2015 6:02 PM
To: Saxton, Thomas (Treasury)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Flint Meeting

If we just could compare the old rates vs. the new Flint River rates it would help immensely. I think we can do something here that the ministers would like.

From: Saxton, Thomas (Treasury)
Sent: Wednesday, February 04, 2015 5:26 PM
To: Muchmore, Dennis (GOV)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Flint Meeting

My plan is to talk to Jerry A. et al. I don't have that old cost & rate info for Flint in my head. At the time it was more of Andy's gig but we will get it.
I will check too as to what they (the City) think of the rfp response for that water consultant i.e., if it is actually going to add value. And don't forget about that loan restructuring; that is about another $2mm+ that could be used to replace bad lines.

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Dennis C. Muchmore
Chief of Staff
Governor Rick Snyder, Michigan
517-241-5601

STAY CONNECTED:

From: Muchmore, Dennis (GOV)
Sent: Thursday, February 05, 2015 6:11 PM
To: Workman, Wayne (TREASURY)
Cc: Saxton, Thomas (Treasury)
Subject: RE: pastor harris

Let me ask as a clarification, this is what the city would pay for the water it receives. The upcharge shouldn't be done as a profit since the city has the town all screwed up. All they should want to do is pay their costs of delivery, which from everything I hear they'll have enough trouble getting the public to do. I would think the city would be willing to straighten out this mess before they have a riot on their hands.

From: Workman, Wayne (TREASURY)
Sent: Thursday, February 05, 2015 3:38 PM
To: Muchmore, Dennis (GOV)
Cc: Saxton, Thomas (Treasury)
Subject: Re: pastor harris

This is only the fixed charge need to pay for water usage also working on getting datA

Sent from my iPhone

On Feb 5, 2015, at 2:22 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> I have talked with Rich, Daddow and the Mayor and all seem to believe that the $847K was a fair discount from the previous rates and they indicate a willingness to reconnect for 15-18 months. How does that calculate with our previous bills and payments?
>
> **From:** "Fonger, Ronald" <RFONGER1@mlive.com>
> **Date:** February 5, 2015 at 1:06:36 PM EST
> **To:** "wurfelb@michigan.gov" <wurfelb@michigan.gov>
> **Subject: pastor harris**
>
> Brad:
> I just spoke with Pastor Harris, the president of the Concerned Pastors for Social Action.
> He said the group asked that Flint be immediately re-connected to Lake Huron water during yesterday's meeting and is expecting a response of some kind by the beginning of next week.
> Would you or Dave Murray want to comment on whether that's under consideration?
> I just wanted you guys to know what he's saying – without equivocation – in the story.
> Thanks,
>
> Ron Fonger

MLive Media Group
Reporter

mobile [redacted]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Muchmore, Dennis (GOV)
Sent: Monday, February 09, 2015 11:36 AM
To: Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: A couple of things

1. I need Darnell Earley's new email and phone; 2. Do we have the numbers on the Flint project: Pre cost of DWSD cut off/Present cost for users? Cost of reconnect on Flint end?
3. Discussion with KWA contractors to get a fix on timeline for construction.

From: Muchmore, Dennis (GOV)
Sent: Wednesday, February 11, 2015 9:13 AM
To: Saxton, Thomas (Treasury)
Cc: Hollins, Harvey (GOV); Workman, Wayne (TREASURY)
Subject: RE: Water Rate History

Whoops, thanks. I didn't realize you had already done this for me. I just found it.

From: Saxton, Thomas (Treasury)
Sent: Tuesday, February 10, 2015 8:43 PM
To: Muchmore, Dennis (GOV)
Cc: Hollins, Harvey (GOV); Workman, Wayne (TREASURY)
Subject: Fw: Water Rate History
Importance: High

I wanted to send you what we had on Flint water in follow-up to the meeting with the pastors. I know we/I had said we would have it early this week. It has been a challenge on a couple of fronts to pull the numbers together. As always in these types of situations it is assuring that the numbers are properly scrubbed & they are 'apples to apples'. Anyway that is why it is taking some time.

The attached are drafts. We have a call with Jerry tomorrow a.m. There are some 'blanks' still particularly on some some of the historical data. Just to give you a sense of the increase the current $149 monthly rate was approx $80/$110ish a few years ago. But we will confirm that with Jerry et al tomorrow a.m.

Again, the attached are drafts. I am sure they will be tweaked tomorrow after talking to Jerry. So please don't share these with anyone yet.
We will have this done tomorrow. But after looking at the drafts please let us know if this is what you had in mind. Thanks

From: Muchmore, Dennis (GOV)
Sent: Thursday, February 12, 2015 4:48 PM
To: Hollins, Harvey (GOV)
Subject: FW: Flint water
Attachments: FlintWater.pdf

Importance: High

Finally found it.

From: Wisniewski, Wendy (GOV)
Sent: Thursday, February 12, 2015 1:34 PM
To: Muchmore, Dennis (GOV)
Subject: FW: Flint water
Importance: High

From: Saxton, Thomas (Treasury)
Sent: Wednesday, February 11, 2015 12:22 PM
To: Muchmore, Dennis (GOV)
Cc: Hollins, Harvey (GOV); Wisniewski, Wendy (GOV); Workman, Wayne (TREASURY)
Subject: Flint water
Importance: High

Dennis – the attached pdf is the memo & table that hopefully addresses some of the info needs stemming from the meeting with the pastors last week. Jerry A. has looked at this document as well. In terms of key items at this point (that are mentioned in the memo)….

KWA may be hooked up by the end of this calendar year; weather permitting, etc. Even allowing for some slippage that is positive news

Whether you hooked to DWSD thru the county or directly; it is a $1mm add'l impact to the budget… an add'l 30% increase in rates over existing

They have $2mm already baked in the budget to fix that two mile 'bad' section of pipeline that might address a good portion of the current issues

They now have an outside consultant on the ground who is suppose to provide some preliminary indications next week to help improve the situation

Don't forget about the $2mm SRF loan restructuring (which we have not officially put on the table). Those $s would be available for more system improvements.

Again, sorry this took as long as it did. Let us know if this is what you had in mind or if you need anything else. Wayne – chime in if I missed anything.

See you @ 1:30

72 (Rev. 11-13)

STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

R. KEVIN CLINTON
STATE TREASURER

DATE: February 11, 2015

TO: Tom Saxton, Chief Deputy Treasurer

FROM: Wayne Workman, Deputy State Treasurer

SUBJECT: City of Flint Water Rates

Attached and below is information regarding the increase in water and sewer rates for the City of Flint since 2010.

- The data shows the significant deficit position of the water fund which was not rectified until 2013 when water rates were increased by 26%. The data also shows the lack of capital investment for a system as old as Flint.

- This condition is acknowledged in the City's recently adopted Capital Improvements Plan which identified approximately $50M in needed capital improvements over the next several years. This deficiency was also noted in the rate study commissioned by the City of Flint in 2014.

- According to the City, if Flint reconnected to DWSD for the next 18 months, the estimated monthly cost would be more than $1M per month totaling approximately $18M. This includes a fixed monthly charge of $846,700 plus the cost of actual water usage, minus the cost of operational expenditures at the Water Treatment Plant. Even with the elimination of future capital improvements, most of the additional cost would need to be funded with an additional increase to existing rates. Such an increase could approach 30%.

- The option of purchasing DWSD water from the County would be on parity with purchasing water directly from DWSD.

- The KWA previously advised the City that the connection to KWA may take place in mid-2016, but has now stated that weather conditions permitting, the connection could be made as early as December 2015.

- The $8M capital costs to upgrade the Water Treatment Plant was made to be able to treat both river water and KWA water. This upgrade has been funded with the cost reduction in operating costs achieved by not buying water from DWSD during the interim period.

- As you are aware, the City has retained Veolia as an outside water consultant to assist in maintaining the safety and improving the quality of water produced by its water system, and their initial analysis is due to be completed within the next two weeks. In addition, the City's current budget includes $2M for replacement of a 2-mile pipeline segment that is anticipated to significantly address some of the current water issues.

Average monthly bill in 2015 - note that water and sewer are not billed separately; the charges are included within the same bill regardless of water usage.

Water service charge	$22.90
Sewer service charge	$34.48
Total service charge	$57.38

Per unit rate:	
Water	$ 7.92
Sewer	$ 5.17
Total per unit	$13.09

Average family of four uses 7 units per month.
Their bill for usage would be: 7 x 13.09 = 91.63 + 57.38 service charge = $149.

If additional information is desired, please let me know.

City of Flint Water Rate History

Year (Date Effective)	Average Monthly Water/Sewer Bill*	Percentage Change in Water/Sewer Rates	Water Fund** Total Operating Revenue	Water Fund** Unrestricted Net Position	Water Fund** Capital Improvements
2010	$64	12%	$31,956,754	-$5,795,973	$2,091,160
1/15/2011	$82	29%	$36,762,663	-$12,443,265	$1,403,916
9/16/2011	$111	35%			
7/1/2012	$111	26%	$44,854,439	-$8,758,091	$755,681
2013	$140	0%	$49,903,868	$834,447	$147,462
07/01/13 to 06/30/14	$140	0%	$43,552,152	$760,745	$3,301,700
07/01/14 to 06/30/15	$149***	6%	N/A	N/A	N/A

Note* Water rate information is based on average usage of 7 units per month with a 5/8" residential remote meter.

Note** Water fund information was compiled from the City of Flint's CAFR filed with the Michigan Department of Treasury.

Note*** Billing breakdown contained in attached memo.

From: Muchmore, Dennis (GOV)
Sent: Wednesday, April 08, 2015 4:03 PM
To: Hollins, Harvey (GOV)
Subject: FW: PRESS RELEASE: Flint Water Improvements
Attachments: Flint Water Improvements 2015.pdf

This is the latest.

From: Jason Lorenz [mailto:jlorenz@cityofflint.com]
Sent: Wednesday, April 08, 2015 12:04 PM
Subject: PRESS RELEASE: Flint Water Improvements

For Immediate Release

City of Flint Announces Action Plan to Maintain Safety and Improve Quality of Flint Water

Flint, Michigan – April 8, 2015 – The City of Flint is proceeding with a series of actions to ensure the continued safety of Flint drinking water is maintained and that issues of discoloration and odor continue to be addressed. Most notably, the installation of a Granulated Active Charcoal filter (GAC) at the Water Treatment Plant is expected to be authorized this week by Emergency Manager Jerry Ambrose.

The introduction of the GAC to the treatment process at Flint's plant will absorb or reduce the chemical precursors which will block or eliminate the formation of TTHM during the filtration process. Engineering and design are underway and installation of the GAC is targeted for completion by mid-July. Cost of this improvement is projected at $1.5 million and will be paid for by the proceeds from the state approved restructuring of the City's Drinking Water Revolving Fund loans.

In addition to the installation of the GAC, the City of Flint is undertaking a number of other improvements to the water system in the coming months, including a water leak detection monitoring, completion of the hydraulic model and subsequent targeted hydrant flushing program, and the replacement of two miles of water main pipe in a critical area of the city. All of these improvements scheduled to occur within the next six months.

"The replacement of this two mile section of pipe along Dupont Street has been identified by a water reliability study as a significant piece of infrastructure and will greatly improve the movement of water in that area of the

city," said Dept. of Public Works Director Howard Croft. Increasing the circulation of the water in the system will immediately result in improvements in water aesthetics, such as discoloration and odor. The MDEQ has given its approval to the project and the process of bidding for construction will begin next week. Construction will take place during the summer of this year.

Ongoing repairs and maintenance also continue to improve the health of the system. To date, about 200 water main breaks have been repaired this year. Whenever major work that may disrupt service is scheduled, the City works to notify residents in the affected area with signage and with posts to cityofflint.com. Updates will include the area of work and the estimated time of completion.

Each main break repair stirs sediments in the line. "Residents should know that there is a chance of discoloration or odor any time work is being done on a main in their area," said Croft. "This is nothing to be alarmed about and it doesn't mean the water is unsafe." If discoloration of water or odor occurs due to repairs, residents are reminded that running the water for a few minutes should clear the line. Anyone with water questions should call 810-787-6537.

The City of Flint remains committed to addressing water related issues. Along with maintaining the safety of the water, addressing quality and affordability are top priorities. The steps outlined above are indicators of the City's progress in addressing the most pressing concerns surrounding water. Emergency Manager Ambrose reiterated that development of a contract with DWSD was not going to happen.

"Those advocating for a return to DWSD do not want to recognize the financial realities of such a move. Not only would such a move increase the City's costs by more than $1million per month, but the water from Detroit is no safer than Flint water, as both entities are measured by the same MDEQ standards that have been in place for years. Why anyone would want to send a million dollars a month to DWSD rather than make necessary repairs to the City's own system is beyond me."

Further updates on the progress being made to improve Flint's water system will released in regular updates to the media and in updates to the City's website, cityofflint.com. Anyone wishing to report an issue can do so under "Online Services". Anyone with questions about these or any other water issues should call the water treatment plant at 810-787-6537.

–END–

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039

jlorenz@cityofflint.com

Gerald Ambrose
Emergency Manager

Dayne Walling
Mayor

Jason Lorenz
Public Information Officer
(810) 237-2039
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–CONTINUE–

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–CONTINUE–

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"Those advocating for a return to DWSD do not want to recognize the financial realities of such a move. Not only would such a move increase the City's costs by more than $1million per month, but the water from Detroit is no safer than Flint water, as both entities are measured by the same MDEQ standards that have been in place for years. Why anyone would want to send a million dollars a month to DWSD rather than make necessary repairs to the City's own system is beyond me."

Further updates on the progress being made to improve Flint's water system will released in regular updates to the media and in updates to the City's website, cityofflint.com. Anyone wishing to report an issue can do so under "Online Services". Anyone with questions about these or any other water issues should call the water treatment plant at 810-787-6537.

–END–

-Jason Lorenz
Public Information Officer
City of Flint

(810) 237-2039
jlorenz@cityofflint.com

Gerald Ambrose
Emergency Manager

Dayne Walling
Mayor

Jason Lorenz
Public Information Officer
(810) 237-2039
jlorenz@cityofflint.com

For Immediate Release

City of Flint Announces Action Plan to Maintain Safety and Improve Quality of Flint Water

Flint, Michigan – April 8, 2015 – The City of Flint is proceeding with a series of actions to ensure the continued safety of Flint drinking water is maintained and that issues of discoloration and odor continue to be addressed. Most notably, the installation of a Granulated Active Charcoal filter (GAC) at the Water Treatment Plant is expected to be authorized this week by Emergency Manager Jerry Ambrose.

The introduction of the GAC to the treatment process at Flint's plant will absorb or reduce the chemical precursors which will block or eliminate the formation of TTHM during the filtration process. Engineering and design are underway and installation of the GAC is targeted for completion by mid-July. Cost of this improvement is projected at $1.5 million and will be paid for by the proceeds from the state approved restructuring of the City's Drinking Water Revolving Fund loans.

In addition to the installation of the GAC, the City of Flint is undertaking a number of other improvements to the water system in the coming months, including a water leak detection monitoring, completion of the hydraulic model and subsequent targeted hydrant flushing program, and the replacement of two miles of water main pipe in a critical area of the city. All of these improvements scheduled to occur within the next six months.

"The replacement of this two mile section of pipe along Dupont Street has been identified by a water reliability study as a significant piece of infrastructure and will greatly improve

–CONTINUE–

the movement of water in that area of the city," said Dept. of Public Works Director Howard Croft. Increasing the circulation of the water in the system will immediately result in improvements in water aesthetics, such as discoloration and odor. The MDEQ has given its approval to the project and the process of bidding for construction will begin next week. Construction will take place during the summer of this year.

Ongoing repairs and maintenance also continue to improve the health of the system. To date, about 200 water main breaks have been repaired this year. Whenever major work that may disrupt service is scheduled, the City works to notify residents in the affected area with signage and with posts to cityofflint.com. Updates will include the area of work and the estimated time of completion.

Each main break repair stirs sediments in the line. "Residents should know that there is a chance of discoloration or odor any time work is being done on a main in their area," said Croft. "This is nothing to be alarmed about and it doesn't mean the water is unsafe." If discoloration of water or odor occurs due to repairs, residents are reminded that running the water for a few minutes should clear the line. Anyone with water questions should call 810-787-6537.

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"Those advocating for a return to DWSD do not want to recognize the financial realities of such a move. Not only would such a move increase the City's costs by more than $1million per month, but the water from Detroit is no safer than Flint water, as both entities

–CONTINUE–

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Further updates on the progress being made to improve Flint's water system will released in regular updates to the media and in updates to the City's website, cityofflint.com. Anyone wishing to report an issue can do so under "Online Services". Anyone with questions about these or any other water issues should call the water treatment plant at 810-787-6537.

–END–

From: Muchmore, Dennis (GOV)
Sent: Monday, June 01, 2015 5:29 PM
To: [redacted]
Subject: FW: Flint Water Situation

Can we meet with you to discuss this?

From: Hovey, Amy [mailto:Amy.Hovey@mail.house.gov]
Sent: Monday, June 01, 2015 2:39 PM
To: Muchmore, Dennis (GOV)
Subject: Flint Water Situation

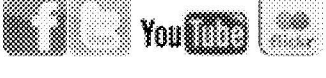
Good afternoon Dennis –

It was great talking with you at the Michigan Policy Conference last week. I am writing to follow up. I am hoping that we can schedule a meeting with the Michigan Health Endowment Fund to discuss the possibilities of the getting a grant to help with the water situation in Flint. At least some subsidy dollars for the very poor that are paying water bills three times higher than the average citizen in this state. I can make myself available to meet in Lansing.

Thank you for your help with this critical issue. I look forward to hearing from you soon.

Enjoy your day!
Amy

Amy Hovey
District Chief of Staff
Congressman Dan Kildee (MI-05)
801. S Saginaw St.
Flint, MI 48502
Phone: (810) 238-8627
www.dankildee.house.gov
www.dankildee.house.gov



http://dankildee.house.gov/newsletter-subscription/

From: Muchmore, Dennis (GOV)
Sent: Thursday, July 23, 2015 7:21 AM
To: Hollins, Harvey (GOV)
Subject: Re: '20150722_Meeting with Flint's Clean Water Coalition'

Talked with Saxton, workman, and Lyon about the issues. Collecting the info and then we'll see where it all stands.

Sent from my iPhone

On Jul 22, 2015, at 4:49 PM, Hollins, Harvey (GOV) <hollinsh@michigan.gov> wrote:

> Chief,
> Just got a call from Wendy re the notes from the Flint meeting. I took a picture of your notes and sent them to you via text. Attached is a copy of my notes.
>
> <20150722_Meeting with Flint's Clean Water Coalition.docx>
>
> Best,
> Harvey Hollins III, Director
> Governorâ€™s Office of Urban Initiatives
>
> 313.456.4994 (office)
> [redacted](Cell)

From: Muchmore, Dennis (GOV)
Sent: Wednesday, August 05, 2015 9:04 AM
To: Hollins, Harvey (GOV)
Cc: Clayton, Stacie (GOV)
Subject: RE: '20150804_Meeting with Flint's Clean Water Coalition'

I didn't think that meeting was as useful as others. If people won't accept the factual information, I'm not sure there is much we can do about it. They're getting their own filters, we've installed six at the main and I thought there were six more coming. As for the flushing, that's part of any city's water system, and people in every community pay for it. As to the frequency, there must be a plan to reduce the number of times.

Questions:
Why does KWA only produce 18 million gals? Doesn't make sense to have a system that doesn't produce enough water. Where do they expect to get the other from? Especially since GM doesn't want the Flint river water (even though presumably GM has been both the biggest commercial user and disposer), how do they separate out the flow?

We can't do too many more of these. The three activists in the room just want to be right, they don't want answers. No matter what we say they'll always want something else to be the answer. The Pastors and the woman form yesterday who usually sits across from me and who always lectures us (that's just a reminder of some of the old time negative racial experiences she's had and I get it) are really a strong group of people. Usually there is a black woman who comes with them, but I missed her yesterday. I really her and of course, Overton and Hill are pretty impressive people in their own right.

From: Hollins, Harvey (GOV)
Sent: Wednesday, August 5, 2015 8:32 AM
To: Muchmore, Dennis (GOV)
Cc: Clayton, Stacie (GOV)
Subject: '20150804_Meeting with Flint's Clean Water Coalition'

Subject: FW: HH/DM & others Re: KWA (Flint Water)
Location: Governor's Conference Room

Start: Wed 8/26/2015 1:30 PM
End: Wed 8/26/2015 2:00 PM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Clayton, Stacie (GOV)

You should come to this...

-----Original Appointment-----
From: Clayton, Stacie (GOV)
Sent: Thursday, August 6, 2015 1:45 PM
To: Clayton, Stacie (GOV); Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Workman, Wayne (TREASURY); Saxton, Thomas (Treasury); Dempkowski, Angela (Treasury); Wisniewski, Wendy (GOV)
Subject: HH/DM & others Re: KWA (Flint Water)
When: Wednesday, August 26, 2015 1:30 PM-2:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Governor's Conference Room

Call In: [redacted]
Access: [redacted]
Harvey will host

Attendees
Dennis Muchmore
Harvey Hollins
Tom Saxton
Wayne Workman -- via phone
Jeff Wright, Genesee Drain Commissioner and Chair of KWA
John O'Brien, Genesee Drain Deputy Commissioner
Dave Jansen, assistant to J. Wright

Agenda Items:
1) Financing of new water system
2) Governing of the new water system
3) Timeline for the build out of KWA

From: Muchmore, Dennis (GOV)
Sent: Monday, September 14, 2015 1:33 PM
To: Hollins, Harvey (GOV)
Subject: FW: PRESS RELEASE: Special Presentation to City Council on Water
Attachments: City Council Meeting Water Presentation 9.14.15.pdf

Why would anyone participate in this one except for informational purposes?

From: Muchmore, Dennis (GOV)
Sent: Monday, September 14, 2015 1:32 PM
To: Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Pallone, Maggie (DEQ) <PalloneM@michigan.gov>
Subject: FW: PRESS RELEASE: Special Presentation to City Council on Water

FYI. Is this your meeting?

From: Jason Lorenz [mailto:jlorenz@cityofflint.com]
Sent: Monday, September 14, 2015 9:09 AM
Subject: PRESS RELEASE: Special Presentation to City Council on Water

For Immediate Release

Special Presentation to City Council on Water to be Included in City Council Meeting Agenda for Monday, September 14, 2015

Flint, Michigan – September 14, 2015 – The agenda for the regular City Council meeting scheduled for Monday, September 14, 2015 at 6:00pm will include a special presentation to update residents on water. The presentation will include the steps taken thus far to address the quality, safety and affordability of the water as well as upcoming plans to make improvements to the water system. This is a public meeting and residents are encouraged to attend.

–END–

-Jason Lorenz
Public Information Officer

City of Flint
(810) 237-2039 (Office)
[redacted](Cell)
jlorenz@cityofflint.com

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

Jason Lorenz
Public Information Officer
Office: (810) 237-2039
Cell: [redacted]
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–END–

From: Muchmore, Dennis (GOV)
Sent: Tuesday, September 15, 2015 9:54 AM
To: Wyant, Dan (DEQ)
Cc: Wurfel, Brad (DEQ)
Subject: Response

Can you fill us in on your response?

DEQ
State DEQ to answer questions about Flint's water woes (Michigan Radio)
"The head of Michigan's Department of Environmental Quality plans to respond Monday to a demand for answers about Flint's water woes. Last week, State Sen. Jim Ananich, D-Flint, state Rep. Sheldon Neeley, D-Flint, and state Rep. Phil Phelps, D-Flushing, sent a letter to DEQ director Dan Wyant demanding answers to a list of questions about the safety and treatment of Flint's drinking water."

From: Muchmore, Dennis (GOV)
Sent: Tuesday, September 22, 2015 4:35 PM
To: 'Andrew Leavitt'
Subject: RE: Independent Water Analysis - Flint

Actually I don't think anyone is to blame, it's just a complicated situation that will not get much better until KWA is up and running. I'll see you tomorrow at 11:00. How about if I buy you lunch, someplace ritzy like Kewpees or Arts?

From: Andrew Leavitt [mailto:ALeavitt@senate.michigan.gov]
Sent: Tuesday, September 22, 2015 4:31 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Re: Independent Water Analysis - Flint

Why don't just you and I meet tomorrow and spend an hour solving this issue? We can argue about who is to blame after we do everything we can to protect the infants and children in Flint. I am supposed to be in Flint all day but I could clear most of it and be here by 11am.

From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Date: Tuesday, September 22, 2015 at 4:15 PM
To: Andy Leavitt <aleavitt@senate.michigan.gov>
Subject: FW: Independent Water Analysis - Flint

Another old article so you have what I have.

From: Muchmore, Dennis (GOV)
Sent: Tuesday, September 22, 2015 4:40 PM
To: 'Andrew Leavitt'
Subject: RE: Independent Water Analysis - Flint

Do you want to come over here first and then we'll go? That way if you get delayed you can just call and I'll sit in my office.

From: Andrew Leavitt [mailto:ALeavitt@senate.michigan.gov]
Sent: Tuesday, September 22, 2015 4:38 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Re: Independent Water Analysis - Flint

Sounds perfect. Kewpees it is.

Thank you.

From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Date: Tuesday, September 22, 2015 at 4:34 PM
To: Andy Leavitt <aleavitt@senate.michigan.gov>
Subject: RE: Independent Water Analysis - Flint

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From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Date: Tuesday, September 22, 2015 at 4:15 PM
To: Andy Leavitt <aleavitt@senate.michigan.gov>
Subject: FW: Independent Water Analysis - Flint

Another old article so you have what I have.

From: Muchmore, Dennis (GOV)
Sent: Tuesday, September 29, 2015 11:33 AM
To: Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: KWA

Can we call the Drain Commissioner immediately and encourage him to put a press on to complete KWA?

From: Muchmore, Dennis (GOV)
Sent: Wednesday, September 30, 2015 9:09 AM
To: Andy Leavitt (aleavitt@senate.michigan.gov)
Subject: Progress Michigan

I assume these jerks don't represent the Minority Leader but it would be nice to see a public denunciation of them from him. I'm sure they didn't volunteer any help to the Flint people or put any effort into alleviating the difficulties the city finds itself in since they never do anything positive.

From: Muchmore, Dennis (GOV)
Sent: Friday, October 02, 2015 9:13 AM
To: Dan Wyant
Subject: Fwd: follow up

FYI

Sent from my iPhone

Begin forwarded message:

> **From:** "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>
> **Date:** October 1, 2015 at 8:25:53 PM EDT
> **To:** "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>, "Khouri, Nick (TREASURY)" <KhouriN@michigan.gov>
> **Cc:** "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>, "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov>
> **Subject: Fw: follow up**
>
> Dennis - in response to your earlier email; Wayne's guys came up with a ballpark estimate for reconnecting to DWSD. Let me emphasize 'ballpark'. They used your assumptions & they talked to Natasha H. after 5:00. Bottom line... the estimated cost is approx $10.5mm to reconnect until June '16.
>
> These numbers on their surface seem much improved over previous DWSD $offers. [Is Daddow in the loop on this ?] We need to give some more thought as to whether this is all inclusive. e.g., there might be some costs from turning down operations at the plant
>
> I am being told this can happen in a relatively short time i.e., less than a week. Which seems aggressive. Obviously that does not mean the lead concerns nor discolored water, etc goes away in a week. The pipe section they sold to the county won't be an impediment to this deal.
>
> There apparently are no 'upfront' costs we need to worry about. In theory, it seems like it can be paid over the 9-10 months (vs a lump sum). But I am not clear Dennis on those couple ideas/sources the Mayor & Senator mentioned i.e., at this point I am not sure where the $10.5mm comes from.
>
> My guess is we will keep refining this estimate. Let us know if you need anything else. Again, "credit " Wayne's guys for pulling this together quickly.

From: Cline, Richard (Treasury)
Sent: Thursday, October 1, 2015 6:08 PM
To: Saxton, Thomas (Treasury); Koryzno, Edward (Treasury); Byrne, Randall (Treasury)
Subject: RE: follow up

City's usage is 14 MGD/Day

Timeline is 9 months until June 2016

Fixed Cost is $662,100 for 9 months or $5,958,900

Commodity Rate is $501,383/month

Total Monthly Cost is $1,163,483

Cost until June 2016 is $10,471,347

The City does not know the cost to move the water plant into stand-by mode. However, they have indicated that there might be some reduced costs as lower chemical costs will be incurred.

Eric Cline | Department Manager | State of Michigan
Michigan Department of Treasury | Local Government Financial Services Division | Fiscal Responsibility Section
430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
Lansing Office (517) 335-2078 | Cell Phone [redacted] | Traverse City Office (231) 922-5228
E-mail cliner1@michigan.gov

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From: Saxton, Thomas (Treasury)
Sent: Thursday, October 01, 2015 6:01 PM
To: Cline, Richard (Treasury) <cliner1@michigan.gov>; Koryzno, Edward (Treasury) <KoryznoE@michigan.gov>; Byrne, Randall (Treasury) <ByrneR1@michigan.gov>
Subject: follow up
Importance: High

I am getting ready to leave… what have you learned ?

From: Muchmore, Dennis (GOV)
Sent: Friday, October 02, 2015 9:14 AM
To: Nick Lyon
Subject: Fwd: follow up

FYI

Sent from my iPhone

Begin forwarded message:

> **From:** "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>
> **Date:** October 1, 2015 at 8:25:53 PM EDT
> **To:** "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>, "Khouri, Nick (TREASURY)" <KhouriN@michigan.gov>
> **Cc:** "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>, "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov>
> **Subject: Fw: follow up**
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To: Saxton, Thomas (Treasury); Koryzno, Edward (Treasury); Byrne, Randall (Treasury)
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Subject: follow up
Importance: High

I am getting ready to leave… what have you learned ?

From: Muchmore, Dennis (GOV)
Sent: Friday, October 02, 2015 10:11 AM
To: Saxton, Thomas (Treasury)
Cc: Khouri, Nick (TREASURY); Workman, Wayne (TREASURY); Stanton, Terry A. (Treasury)
Subject: Re: follow up

I think that Bob Daddow, Rich Baird and Mike Duggan have something to do with the more "reasonable" approach. The Mayor in particular is very concerned about the issues of a fellow community and Daddow is perhaps the finest public administrator in the state. So, their involvement and Rich's management skills are powerful forces.

On Oct 1, 2015, at 8:25 PM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov> wrote:

> Dennis - in response to your earlier email; Wayne's guys came up with a ballpark estimate for reconnecting to DWSD. Let me emphasize 'ballpark'. They used your assumptions & they talked to Natasha H. after 5:00. Bottom line... the estimated cost is approx $10.5mm to reconnect until June '16.
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Subject: follow up
Importance: High

I am getting ready to leave… what have you learned ?

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 07, 2015 10:55 AM
To: Rep. Sheldon Neeley (District 34)
Subject: Re: Testing Children

Thanks Sheldon, your suggestion is under consideration by DHHS, and Nick and his team as well as us are all vitally concerned. Hoping to continue to work with you on solutions to this and other very important problems. High level lead exposure is just not acceptable for anyone but in particular young children and pregnant women. We just have to keep fighting to get solutions in place.

Sent from my iPhone

On Oct 7, 2015, at 10:37 AM, Rep. Sheldon Neeley (District 34) <SheldonNeeley@house.mi.gov> wrote:

> Please see the attached letter. Thank you
>
> Sheldon
>
> <Rep Neeley - Wells Letter.pdf>

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 08, 2015 1:56 PM
To: Saxton, Thomas (Treasury); Duncan, Nancy (DTMB)
Cc: Workman, Wayne (TREASURY); Khouri, Nick (TREASURY); Wyant, Dan (DEQ); Baird, Richard (GOV); Roberts, John (DTMB); Hollins, Harvey (GOV)
Subject: RE: letter from John O'Brien

Don't disagree but we're too far along now to change numbers. So, we'll use the $12M and as the year progresses we'll track it.

From: Saxton, Thomas (Treasury)
Sent: Thursday, October 8, 2015 1:17 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Duncan, Nancy (DTMB) <duncann1@michigan.gov>
Cc: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Wyant, Dan (DEQ) <WyantD@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Roberts, John (DTMB) <RobertsJ9@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Subject: RE: letter from John O'Brien

I agree with Dennis… Consistent with what I think we (Wayne & I) said at the DEQ meeting yesterday… the county drain commission has more knowledge & experience running a water system than we (Treasury) do. That is why we were trying to get some outside verification. We were not able to get an outside engineering firm engaged due to the timeframe. Our fallback was Jeff Wright – the drain commissioner. He calculated $13.2mm. We did a 'back of the envelope' analysis of $10.5mm late last week. That was based off an email we rec'd from Dennis that summarized the DWSD/City proposal. We were not a part of the $12mm calculation that is in the 'public' realm now. I believe that was a result of a meeting DEQ/Dan had with the City earlier this week.
John indicated yesterday he would recommend/prefer to err on the side of caution for the amount requested from the legislature. Plus, keep in mind whatever number you choose assumes completion of KWA in June. If the project slips a month (& it very well could given it is a major capital project) the cost of the reconnect is going to go up a $1mm+ per month.
If it is possible I would recommend using the $13.2mm (hoping the project will be done as scheduled) given the county is in the best position to make that estimate. We don't have any info that would contradict that number.

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 08, 2015 1:13 PM
To: Duncan, Nancy (DTMB) <duncann1@michigan.gov>
Cc: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Khouri, Nick (TREASURY) <KhouriN@michigan.gov>; Wyant, Dan (DEQ) <WyantD@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>; Roberts, John (DTMB) <RobertsJ9@michigan.gov>; Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Subject: Re: letter from John O'Brien

I would say we need to add the $1.2 difference from somewhere. I suggest we hold on to the idea of the bottle deposit escrow as we can easily take $1m droit if need t.

Sent from my iPhone

On Oct 8, 2015, at 10:39 AM, Duncan, Nancy (DTMB) <duncannr1@michigan.gov> wrote:

We're still carrying $12m as the cost to reconnect, and that's the number the Governor is using too. John would like your assessment of the need given the information in this letter. We plan to send a supplemental request to the Legislature for our $6m share this afternoon.

From: Saxton, Thomas (Treasury)
Sent: Wednesday, October 07, 2015 2:43 PM
To: Wyant, Dan (DEQ); Sygo, Jim (DEQ); Muchmore, Dennis (GOV); Roberts, John (DTMB); Baird, Richard (GOV); Lyon, Nick (DHHS); Hollins, Harvey (GOV)
Cc: Workman, Wayne (TREASURY); Khouri, Nick (TREASURY); Duncan, Nancy (DTMB)
Subject: FW: letter from John O'Brien
Importance: High

Here is the letter from the Genesee Co Drain Commission. My interpretation of the contents would be their estimate is $13.2mm (vs the $12mm discussed this morning).

They included their contract with the City. Sec 5.7 references prevailing rates the City would be charged; that is different than the rates reflected in the $13.2mm. So that contract may need to be modified.

They also raise some other items (under *Procedure to Activate Supply* – p.3) that may have cost implications.

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 8:40 AM
To: Wyant, Dan (DEQ); Lyon, Nick (DHHS); Khouri, Nick (TREASURY)
Subject: What's the latest on Flint?

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 8:41 AM
To: Hollins, Harvey (GOV)
Subject: What's the latest on Flint?

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 14, 2015 9:36 AM
To: Saxton, Thomas (Treasury)
Subject: Re: What's the latest on Flint?

ok

On Oct 14, 2015, at 8:12 AM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov> wrote:

> Sorry I didn't get back to you yesterday… you want the City in general [right?] vs the water system. Anyway we are pulling together some bullets on the former.
>
> ---
>
> **From:** Muchmore, Dennis (GOV)
> **Sent:** Tuesday, October 13, 2015 8:42 AM
> **To:** Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>
> **Subject:** What's the latest on Flint?
>
> Tom-
> Where do they stand now on shortfalls, budget and costs of transition?

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 14, 2015 12:10 PM
To: Saxton, Thomas (Treasury)
Cc: Wyant, Dan (DEQ); Roberts, John (DTMB); Workman, Wayne (TREASURY); Baird, Richard (GOV); Khouri, Nick (TREASURY)
Subject: Re: Flint telephone call this morning

Yes, please go ahead. The faster the reconnect occurs the more quickly confidence will be rebuilt.

On Oct 14, 2015, at 10:39 AM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov> wrote:

> I assume we tell them to proceed? I am not aware of the timing on legislative action. The payt to DWSD will ultimately be paid out over time (e.g, say Nov thru June).
>
> ---
>
> **From:** Byrne, Randall (Treasury)
> **Sent:** Wednesday, October 14, 2015 10:21 AM
> **To:** Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>
> **Cc:** Schafer, Suzanne K. (Treasury) <SchaferS7@michigan.gov>
> **Subject:** Flint telephone call this morning
>
> Tom and Wayne:
>
> During our telephone call today, Mayor Walling indicated that they have received the go ahead from the Drain Commissioner and are performing the bacti tests on the eight mile waterline. If all goes well, they may be able to begin to use DWSD water soon. The Mayor wanted to know if they can use DWSD water before the Legislature takes action on the $6M assistance package? Please advise.
>
> Thanks,
> Randy
>
> <image001.jpg>
> Randall Byrne | State Administrative Manager
> Local Government Services - Office of Fiscal Responsibility
> State of Michigan | 430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
> (517) 335-2521 | (517) 373-0633 (fax) | ByrneR1@michigan.gov
>
> Think Green! Don't print this e-mail unless you need to.
>
> *CONFIDENTIALITY NOTICE: This e-mail, and any attachments, is for the sole use of the intended recipient(s) and may contain information that is confidential and protected from disclosure under the law. Any unauthorized review, use, disclosure, or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail, and delete/destroy all copies of the original message and attachments.*

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 14, 2015 4:06 PM
To: Hollins, Harvey (GOV)
Subject: RE: What's the latest on Flint?

Have you talked with Sheldon recently?

From: Hollins, Harvey (GOV)
Sent: Tuesday, October 13, 2015 3:44 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: RE: What's the latest on Flint?

Not much more than what's in the news. I made a couple of

- City Council voted to approve their $2 million to use GLWA
- People are still upset, believing that DEQ is covering up their mistake.
- Most elected officials are pointing fingers at the state.
- Bottled water delivery has slowed a tad.
- Various groups are still delivering water filters, a big filter distribution occurred over the weekend.
- Mayor Walling and his challenger Weaver are debating tonight.

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Subject: What's the latest on Flint?

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Sent: Thursday, October 15, 2015 10:42 AM
To: Hollins, Harvey (GOV)
Subject: RE: What's the latest on Flint?

I've met with both of them once, and I've talked with Ananich more than once on the phone because he called me. You've talked to him multiple times, and you're the lead. Don't know what he wants since he's getting to talk with you over and over. By the way, did our ministers call you and say "thank you Harvey, we couldn't get anyone else to listen to us and you did"?

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Sent: Wednesday, October 14, 2015 10:22 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
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> **Sent:** Tuesday, October 13, 2015 8:41 AM
> **To:** Hollins, Harvey (GOV) <hollinsh@michigan.gov>
> **Subject:** What's the latest on Flint?

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 15, 2015 11:24 AM
To: 'Dayne Walling'; Workman, Wayne (TREASURY)
Cc: Natasha Henderson
Subject: RE: Contract for Water

Thanks Dayne, I'll get with Wayne.

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Thursday, October 15, 2015 11:02 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Cc: Natasha Henderson <nhenderson@cityofflint.com>
Subject: Contract for Water

Gentlemen, I have asked City Administrator Natasha Henderson to reach out to you at Treasury Wayne about the contract for Detoit water. The Mott Foundation has questions about payments and ensuring all parties are contributing to the monthly costs as well as how an escrow fund would work to ensure funds are solely for this purpose. Time is of the essence as you know and the City is prepared to do all things necessary for the water to begin flowing as quickly as possible as we have agreed. Thanks for your tremendous efforts on this and we look forward to finalizing the agreements hopefully today or tomorrow.

--

Dayne Walling
Mayor, City of Flint
City Hall, 1101 S. Saginaw St.
Flint, MI 48502
810-766-7346
mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 15, 2015 11:25 AM
To: Workman, Wayne (TREASURY)
Subject: FW: Contract for Water

Are you handling all this?

From: Dayne Walling [mailto:dwalling@cityofflint.com]
Sent: Thursday, October 15, 2015 11:02 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Cc: Natasha Henderson <nhenderson@cityofflint.com>
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mayor@cityofflint.com
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follow me on twitter at http://twitter.com/mayorwalling

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 15, 2015 11:25 AM
To: Hollins, Harvey (GOV); Wyant, Dan (DEQ); Lyon, Nick (DHHS)
Subject: FW: Contract for Water

fyi

From: Dayne Walling [mailto:dwalling@cityofflint.com]
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mayor@cityofflint.com
www.cityofflint.com
follow me on twitter at http://twitter.com/mayorwalling

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 15, 2015 11:29 AM
To: 'senatorjananich@senate.michigan.gov'; 'Rep. Sheldon Neeley (District 34)'
Cc: Andy Leavitt (aleavitt@senate.michigan.gov)
Subject: FW: PRESS RELEASE: RTAB Approves Resolution for the Use of $2 Million in Fund Balance to Reconnect to Detroit Water
Attachments: RTAB Approves $2million.pdf

I know you've seen this but I wanted to make sure.

From: Jason Lorenz [mailto:jlorenz@cityofflint.com]
Sent: Wednesday, October 14, 2015 6:19 PM
Subject: PRESS RELEASE: RTAB Approves Resolution for the Use of $2 Million in Fund Balance to Reconnect to Detroit Water

For Immediate Release

RTAB Approves Resolution for the Use of $2 Million in Fund Balance to Reconnect to Detroit Water

Flint, Michigan – October 14, 2015 – The City of Flint's Receivership Transition Advisory Board has today approved a resolution that directs $2 Million in fund balance from the Water and Sewer funds be used to fund Flint's portion of the reconnection to Detroit as the City's water source. The Board voted unanimously to approve the measure which will compliment commitments by Governor Snyder in the amount of $6 million and the Charles Stewart Mott Foundation in the amount of $4 million, respectively, for a total reconnection cost of $12 million.

"Flint is one step closer to switching back to Detroit water with the board's approval," said Mayor Dayne Walling. "Now we need approval from the state treasurer and support from the state legislature and I urge them to act immediately." Approval from the legislature is required to finalize the negotiations with the Great Lakes Water Authority, formerly Detroit Water and Sewerage (DWSD). Once the contract between the Authority, Genesse County and the City are complete, Flint can once again begin receiving treated Lake Huron water from Detroit.

–END–

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039 (Office)
[redacted] (Cell)
jlorenz@cityofflint.com

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

Jason Lorenz
Public Information Officer
Office: (810) 237-2039
Cell: [redacted]
jlorenz@cityofflint.com

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–END–

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 15, 2015 5:58 PM
To: Hollins, Harvey (GOV)
Subject: RE: What's the latest on Flint?

I got so I believed that the only people that were telling you and I the truth were these ministers. It was Overton, Harris and who were the other ones?

From: Hollins, Harvey (GOV)
Sent: Thursday, October 15, 2015 4:36 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Re: What's the latest on Flint?

The ministers did call and said thank you to both you and me.

Best,
Harvey

On Oct 15, 2015, at 10:42 AM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

> I've met with both of them once, and I've talked with Ananich more than once on the phone because he called me. You've talked to him multiple times, and you're the lead. Don't know what he wants since he's getting to talk with you over and over. By the way, did our ministers call you and say "thank you Harvey, we couldn't get anyone else to listen to us and you did"?
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From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 13, 2015 8:41 AM
To: Hollins, Harvey (GOV) <hollinsh@michigan.gov>
Subject: What's the latest on Flint?

From: Muchmore, Dennis (GOV)
Sent: Friday, October 16, 2015 4:31 PM
To: 'Rep. Sheldon Neeley (District 34)'
Subject: FW: PRESS RELEASE: City of Flint Reconnects to Detroit Water
Attachments: CoF.DWSD.Agreement.2015.pdf

From: Jason Lorenz [mailto:jlorenz@cityofflint.com]
Sent: Friday, October 16, 2015 4:09 PM
Subject: PRESS RELEASE: City of Flint Reconnects to Detroit Water

For Immediate Release

City of Flint Reconnects to Detroit Water

Flint, Michigan – October 16, 2015 – Flint has reconnected to Detroit water. reached an agreement with the Detroit Water and Sewerage Department (DWSD) for the temporary provision of treated Lake Huron water to Flint. Work to establish the reconnection will begin immediately in a coordinated effort between the City of Flint, Genesee County and the DWSD.

A tremendous effort by all three partners, along with the efforts of the Governor and the State Legislature, ensured that this action occurred as quickly as possible. "The money from the state to begin fixing Flint water by reconnecting to Detroit is just a start – a down payment,´ said Mayor Dayne Walling. "I am not going to stop until every drop of drinking water in Flint is 100% safe."

Detroit water will be introduced into the Flint system throughout the evening. It is expected that the thorough replacement from Flint River water to Detroit water will happen after approximately three weeks. Residents in Flint may see discoloration as well as noticing some taste and odor issues during the transition.

Water provided by DWSD will contain corrosion control agents to hinder the leaching of lead from old pipes into the water; however, the City will also be adding additional corrosion control agents to further minimize the risk presented by lead pipes.

The contract between the City and DWSD calls for the provision of 12.5 million gallons per day (mgd) of treated water from Lake Huron at a cost of $1.1 million per month. DWSD Director Sue McCormick noted that the talks between Flint, DWSD and the GLWA Board were very cordial: "everyone acted in a spirt of cooperation in order to come to this agreement." Flint will purchase water from Detroit until the Karegnondi Water Authority (KWA) pipeline can be completed in 2016. At that time, the KWA will become the primary water source for the City and the Flint River will remain as a backup system.

Residents with questions or concerns about the hydrant flushing in their area can call the Water Service Center at 810-766-7202. Continuing information on water will be provided via the City of Flint's website, cityofflint.com.

–END–

-Jason Lorenz
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–CONTINUE–

Dayne Walling
Mayor

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–END–

From: Muchmore, Dennis (GOV)
Sent: Friday, October 16, 2015 4:32 PM
To: Jim Ananich (jananich@att.net); Andy Leavitt (aleavitt@senate.michigan.gov)
Subject: FW: PRESS RELEASE: City of Flint Reconnects to Detroit Water
Attachments: CoF.DWSD.Agreement.2015.pdf

FYI

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–CONTINUE–

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Mayor

Natasha L. Henderson
City Administrator

The contract between the City and DWSD calls for the provision of 12.5 million gallons per day (mgd) of treated water from Lake Huron at a cost of $1.1 million per month. DWSD Director Sue McCormick noted that the talks between Flint, DWSD and the GLWA Board were very cordial: "everyone acted in a spirt of cooperation in order to come to this agreement." Flint will purchase water from Detroit until the Karegnondi Water Authority (KWA) pipeline can be completed in 2016. At that time, the KWA will become the primary water source for the City and the Flint River will remain as a backup system.

Residents with questions or concerns about the hydrant flushing in their area can call the Water Service Center at 810-766-7202. Continuing information on water will be provided via the City of Flint's website, cityofflint.com.

–END–

From: Muchmore, Dennis (GOV)
Sent: Monday, October 19, 2015 4:24 PM
To: Andy Leavitt (aleavitt@senate.michigan.gov)
Subject: FW: PRESS RELEASE: Mayor Dayne Walling Response to MDEQ's Admission of Fault in Flint's Water Emergency
Attachments: Mayor Response to MDEQ Statement 10.19.15.pdf

Walling doesn't really want to go down this path does he?

From: Jason Lorenz [mailto:jlorenz@cityofflint.com]
Sent: Monday, October 19, 2015 4:11 PM
Subject: PRESS RELEASE: Mayor Dayne Walling Response to MDEQ's Admission of Fault in Flint's Water Emergency

For Immediate Release

Mayor Dayne Walling Response to MDEQ's Admission of Fault in Flint's Water Emergency

Flint, Michigan – October 19, 2015 – The following is a response from Mayor Dayne Walling regarding the MDEQ's statement admitting fault in the Flint water emergency:

Today, the Michigan Department of Environmental Quality (MDEQ) acknowledges its leading role in the decision-making that led to the contamination of Flint's drinking water. The people of Flint hear this admission and we demand that the State fully fix this problem they caused. While the State taking responsibility and the switch to Detroit water are steps in the right direction for Flint, actions speak louder than words. Now, the Governor and the State need to provide tens of millions of dollars to fix Flint's water and infrastructure as well as to provide for the families, children and schools affected. I will continue to push for changes and advocate for our City until every drop of water is 100% safe.

The MDEQ assured Flint that the switch was being handled safely and responsibly. We relied on the information from MDEQ, and clearly that information was wrong. My heart goes out to the children and families who are affected by this issue.

This morning our local Senator Jim Ananich said the following: "We do not know whether the misapplication of federal rules was intentional or due to negligence. That's why the Legislature needs to have a robust role in any investigation, and in ensuring those responsible for Flint's water crisis are

held accountable." I applaud Senator Ananich's Statement and I urge the Governor and State Officials to take the necessary steps to ensure accountability so that this never happens again to any community.

–END–

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039 (Office)
[redacted](Cell)
jlorenz@cityofflint.com

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

Jason Lorenz
Public Information Officer
Office: (810) 237-2039
Cell: [redacted]
jlorenz@cityofflint.com

For Immediate Release

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–END–

From: Muchmore, Dennis (GOV)
Sent: Tuesday, October 20, 2015 9:50 AM
To: Wyant, Dan (DEQ)
Subject: Keep your chin up...

...tough sledding on this one, but you've done as much as you can. Darnell Early wants to respond in kind to his Flint detractors and I think we should consider it.

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 21, 2015 12:50 PM
To: Andrew Leavitt
Subject: Re: 10.21.15-Ananich-Letter-LevinAppointment-FINAL.pdf

Hi Andy, sure we can talk more. We thought if we put the pediatrician from Hurley on it would be better optics wise.

> On Oct 21, 2015, at 12:12 PM, Andrew Leavitt <ALeavitt@senate.michigan.gov> wrote:
>
> Hi Dennis,
>
> Jim spoke with Senator Levin. I think it is worth us talking about. Do you have time to chat today?
>
>
>
>> On 10/21/15, 10:42 AM, "Andrew Leavitt" <ALeavitt@senate.michigan.gov> wrote:
>>
>> Good Morning Gentlemen,
>>
>> Jim has placed a call to Senator Levin asking him if he would be interested in serving in some capacity on the Flint water review but they have not connected. To be fair to the Governor he wanted to make him aware that he would like Senator Levin to have a role in the process.
>>
>> Thanks,
>>
>> Andy
>>

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 21, 2015 1:27 PM
To: Andrew Leavitt
Subject: Re: 10.21.15-Ananich-Letter-LevinAppointment-FINAL.pdf

They're ready to announce the work group so I'll pitch to add Carl as a recommendation from Jim.

> On Oct 21, 2015, at 1:08 PM, Andrew Leavitt <ALeavitt@senate.michigan.gov> wrote:
>
> Let me know what time works. They should certainly be involved but I think for our community to feel respected and restore trust it will take someone like Senator Levin. He has longstanding relationships with the community and is trusted.
>
>
>
>
>> On 10/21/15, 12:50 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:
>>
>> Hi Andy, sure we can talk more. We thought if we put the pediatrician from Hurley on it would be better optics wise.
>>
>>> On Oct 21, 2015, at 12:12 PM, Andrew Leavitt <ALeavitt@senate.michigan.gov> wrote:
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>>>>
>>>> Thanks,
>>>>
>>>> Andy
>>>>

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 21, 2015 3:03 PM
To: Jim Ananich (jananich@att.net); Andy Leavitt (aleavitt@senate.michigan.gov)
Subject: Dr. Reynolds

I have recommended Carl be added to the Commission. Since they won't really be a voting body I suggested he be added as an ex-officio member. Here is the rec for the Hurley person.

Dr. Lawrence Reynolds from Flint to join our After Action team.
He's been a long time pediatrician in Flint. Well respected in the community.
He was affiliated with Mott Children Health Center for several years, but is listed as affiliated with Hurley now.
His background looks excellent.

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 21, 2015 3:35 PM
To: Andrew Leavitt
Cc: Jim Ananich (jananich@att.net)
Subject: Re: Dr. Reynolds

The ex-officio was just an idea from me because the commission had already been impaneled. I'll suggest other alternatives. I actually liked the idea because it would give him some flexibility time wise. Dr. Reynolds is very solid and lives in Flint so I think he's a great choice.

Sent from my iPhone

On Oct 21, 2015, at 3:05 PM, Andrew Leavitt <ALeavitt@senate.michigan.gov> wrote:

> Dennis you and I both know Carl deserves more respect than to be an ex-officio to this group. He could have done this right.
>
> ---
>
> **From:** "Muchmore, Dennis (GOV)"
> **Date:** Wednesday, October 21, 2015 at 3:03 PM
> **To:** "Jim Ananich (jananich@att.net)", Andrew Leavitt
> **Subject:** Dr. Reynolds
>
> I have recommended Carl be added to the Commission. Since they won't really be a voting body I suggested he be added as an ex-officio member. Here is the rec for the Hurley person.
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>
> He's been a long time pediatrician in Flint. Well respected in the community.
>
> He was affiliated with Mott Children Health Center for several years, but is listed as affiliated with Hurley now.
>
> His background looks excellent.

From: Muchmore, Dennis (GOV)
Sent: Wednesday, October 21, 2015 5:47 PM
To: Andrew Leavitt
Subject: Re: Dr. Reynolds

I made the request as a regular member

Sent from my iPhone

> On Oct 21, 2015, at 3:45 PM, Andrew Leavitt <ALeavitt@senate.michigan.gov> wrote:
>
> Larry is awesome but he admittedly is not the person to thoroughly review employee policies within a department? How a culture got so bad in the City of Flint and DEQ's water departments that no one thought they should step up and try and stop this. This is as much HR and bureaucracy knowledge as it is lead issues.
>
> I think we see this as two parts.
>
> One being policy, which Sikkema/Kolb et al will do great at.
>
> Two being oversight, ensuring all the bad actors from state and local government are held accountable and that the people of Flint get the answers they are so desperately are searching for.
>
> We believe this group lacks the ability in the latter department. That's why Levin doing something would be tremendous. He seemed generally interested.
>
>
>
>> On 10/21/15, 3:35 PM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:
>>
>> The ex-officio was just an idea from me because the commission had already been impaneled. I'll suggest other alternatives. I actually liked the idea because it would give him some flexibility time wise. Dr. Reynolds is very solid and lives in Flint so I think he's a great choice.
>>
>> Sent from my iPhone
>>
>> On Oct 21, 2015, at 3:05 PM, Andrew Leavitt
<ALeavitt@senate.michigan.gov<mailto:ALeavitt@senate.michigan.gov>> wrote:
>>
>> Dennis you and I both know Carl deserves more respect than to be an ex-officio to this group. He could have done this right.
>>
>>
>>
>> From: "Muchmore, Dennis (GOV)"
>> Date: Wednesday, October 21, 2015 at 3:03 PM
>> To: "Jim Ananich (jananich@att.net<mailto:jananich@att.net>)", Andrew Leavitt
>> Subject: Dr. Reynolds
>>

>> I have recommended Carl be added to the Commission. Since they won't really be a voting body I suggested he be added as an ex-officio member. Here is the rec for the Hurley person.
>> Dr. Lawrence Reynolds from Flint to join our After Action team.
>> He's been a long time pediatrician in Flint. Well respected in the community.
>> He was affiliated with Mott Children Health Center for several years, but is listed as affiliated with Hurley now.
>> His background looks excellent.
>>
>>
>>

From: Muchmore, Dennis (GOV)
Sent: Thursday, October 22, 2015 4:20 PM
To: 'Rep. Sheldon Neeley (District 34)'
Cc: Workman, Wayne (TREASURY)
Subject: RE: State Portion of Flint Water Reconnection

Rep. Neely-
The city made a deal with the DWSD without informing us beforehand. It required an upfront payment, which as I'm sure you are aware isn't the right way to conduct the transaction as expectations were that it would be paid out over time with use. We are taking care of the misstep to get it all back on track.

From: Rep. Sheldon Neeley (District 34) [mailto:SheldonNeeley@house.mi.gov]
Sent: Thursday, October 22, 2015 3:43 PM
To: Khouri, Nick (TREASURY) <KhouriN@michigan.gov>
Cc: GovernorsOffice <GovernorsOffice@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>; nhenderson@cityofflint.com
Subject: State Portion of Flint Water Reconnection

Please see attached letter. Thanks for your cooperation.

Sheldon

From: Muchmore, Dennis (GOV)
Sent: Monday, October 26, 2015 1:50 PM
To: 'Darnell Earley'
Subject: RE: Question for you...

Great to see the Op-Ed, I'm tired of seeing good people getting kicked around without a chance to set the record straight.

Frankly, the everyday Flint citizen has been very poorly served by these folks, and without help the city would have been bankrupt and my guess the problem exacerbated. Every single one of us is very disappointed and disheartened by the lead issue, and no one, especially you and I, thinks lead is acceptable at any level even though the feds recognize that a certain level is to be expected. A regular Flint citizen has every right to be ticked off by the findings, and I certainly don't blame them for being irritated they have this problem, need bottled water and filters, etc., but it's the old pipes that are the problem.

Lead doesn't magically appear or disappear because of the Flint River water, which we all, including you, expressed a lot of reservation about using. But, the river was always the back-up long before EM's and state involvement, and the locals went forward with the same understandings. Frankly, the response to the "dirty" water and the smell obviously precipitated chemical cures which may or may not have facilitated the leaching. Some of the levels will be relieved by the Lake Huron water, but not the essential issue in old cities throughout the country where the only resolution to lead levels is getting rid of old houses with lead issues and old pipes. Quite an undertaking, but without a viable city it could never be tackled.

From: Darnell Earley [mailto:darnell.earley@detroitk12.org]
Sent: Friday, October 23, 2015 2:56 PM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>
Subject: Re: Question for you...

Dennis,

I am attending MASB but will get with staff first thing Monday to deal with this issue.

Thanks for your support on the op-Ed. It feels good to have my side of the story out there.

Have a great weekend!

Darnell

Sent from my iPhone

On Oct 23, 2015, at 12:12 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

I loved the op-ed. Only my PR wife keeps me from writing some much stronger language…

From: Muchmore, Dennis (GOV)
Sent: Thursday, November 12, 2015 4:53 PM
To: Workman, Wayne (TREASURY)
Subject: RE: Flint

Enjoy…

From: Workman, Wayne (TREASURY)
Sent: Thursday, November 12, 2015 11:31 AM
To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>
Subject: RE: Flint

Not very soon. They have only been there 6 months and the City now has a very large deficit in the Water Fund. We talked with the new Mayor about it on Tuesday. I will probably be in Flint next week with the Mayor and City Administrator.

From: Muchmore, Dennis (GOV)
Sent: Thursday, November 12, 2015 11:13 AM
To: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Subject: Flint

Now that the election is past and we are looking forward, how soon do you see us getting rid of the RTAB?

From: Muchmore, Dennis (GOV)
Sent: Thursday, November 19, 2015 2:27 PM
To: 'Andy Dillon'
Subject: RE: Flint water

I don't remember what the phone call was about, obviously Flint alternative water supplies. But, it is not the call where you told me you were going to approve the switch. I know which date that was and it wasn't this one.

As for the decision making on the switch, as I remember it, the Flint people demanded you go to KWA. They (as I remember you indicated Curtis, the Drain Commissioner, Gleason, Emerson and United Way Brown?, thought it would serve the city best in the long run to get out of DWSD. I remember you agonized over it and questioned the switch in several different conversations. Ultimately you felt that the city would be back under local governance in the future and if that's what they wanted you understood their concerns. I also seem to remember discussions about the County Commission wanting the switch and their advocacy in the switch as well as the Flint labor Council. It's a long time ago, and I don't have any notes on it as we had at least five or six conversations on this, but I think this sounds correct. You were acting as State Treasurer but really keeping us plugged But, I could have the specifics on this wrong....

From: Andy Dillon [mailto:adillon@conwaymackenzie.com]
Sent: Thursday, November 19, 2015 2:04 PM
To: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>
Subject: Fwd: Flint water

I am not anxious to respond to him but my experience of ignoring him hasn't been very productive.

He is focused in on a relevant question.

Andy Dillon
Conway MacKenzie Inc.
401 S. Old Woodward Avenue, Suite 340, Birmingham, MI 48009
248.952.8868 (office) | [redacted](cell) | 248.433.3143 (fax)
adillon@conwaymackenzie.com

---------- Forwarded message ----------
From: **Egan, Paul** <pegan@freepress.com>
Date: Thu, Nov 19, 2015 at 1:48 PM
Subject: Flint water
To: "ADillon@ConwayMacKenzie.com" <ADillon@conwaymackenzie.com>

Hi Andy: Why did the state and city opt to go with KWA for Flint water supply when the study you commissioned from Tucker, Young, Jackson, Tull found that going with KWA would be more costly than staying with DWSD? (Here is excerpt from p. 17):

"Based on the analysis, it is prudent to assume the KWA water supply option costs would be somewhere between the KWA-1 and KWA-2 options. Therefore, the analysis indicates that the two DWSD options of supplying 8 MGD on a maximum day and up to 8 MGD on average are the least cost options for Flint. These options allow Flint to maximize the use of existing assets; the City of Flint's (the Flint WTP) and DWSD's (the existing 72-inch main)."

How would you describe your role in the chain of decisions that led to Flint drawing its water supply from the Flint River?

The Flint City Council opted to go with the KWA on the evening of March 25, 2013. Your schedule shows you had a 5 p.m. phone conversation at 5 p.m. that day with Dennis Muchmore "regarding Flint Water Supply alternatives."

The next day, March 26, 2013, your schedule shows a 9 a.m. meeting at Treasury "regarding Flint water, a 1:30 p.m. phone call with Dan Wyant "regarding Flint/KWA," and a w p.m. meeting in Lansing with Flint Mayor Dayne Walling?

What do you recall about these conversations/meetings? Did Muchmore sign off on the switch to KWA on behalf of the governor?

Thanks, Paul Egan

Detroit Free Press

Cell [redacted]

From: Muchmore, Dennis (GOV)
Sent: Thursday, November 19, 2015 2:36 PM
To: 'Andy Dillon'
Subject: RE: Flint water

Do you have any idea what the call was about?

From: Andy Dillon [mailto:adillon@conwaymackenzie.com]
Sent: Thursday, November 19, 2015 2:04 PM
To: Saxton, Thomas (Treasury) <SaxtonT@michigan.gov>; Muchmore, Dennis (GOV) <muchmored@michigan.gov>; Baird, Richard (GOV) <bairdr@michigan.gov>
Subject: Fwd: Flint water

I am not anxious to respond to him but my experience of ignoring him hasn't been very productive.

He is focused in on a relevant question.

Andy Dillon
Conway MacKenzie Inc.
401 S. Old Woodward Avenue, Suite 340, Birmingham, MI 48009
248.952.8868 (office) | [redacted] cell) | 248.433.3143 (fax)
adillon@conwaymackenzie.com

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What do you recall about these conversations/meetings? Did Muchmore sign off on the switch to KWA on behalf of the governor?

Thanks, Paul Egan

Detroit Free Press

Cell [redacted]

From: Derek Dalling <Derek@KindsvatterAssociates.com>
Sent: Wednesday, September 11, 2013 9:20 AM
To: Ackerman, Darin (GOV)
Cc: Brad Comment; Matt Solak
Subject: Treasury

Darin:

Thanks again for your willingness to reach out to Treasury. Senator Ananich plans to ask you about Treasury this morning at 10:00 a.m.

As you recall, the situation with the pipeline is delicate in nature. We trust your judgment on how to ask the question and hopefully not bring the KWA pipeline into the discussion. With that in mind, here is what we suggest as the question:

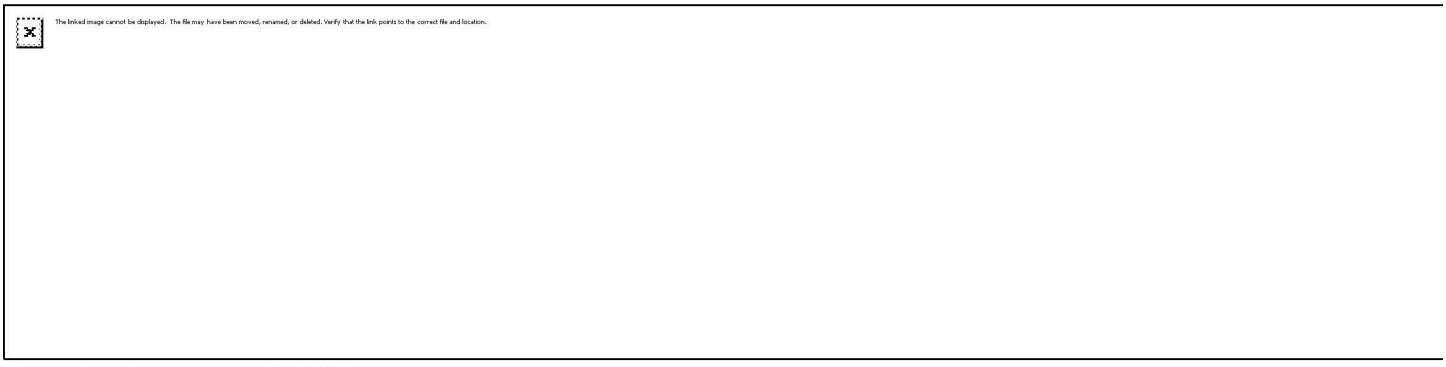
[redacted]

Thanks again!

Derek Dalling
President & CEO
Kindsvatter, Dalling & Associates, Inc.
1000 West St. Joseph Highway, Suite 200
Lansing, MI 48915
(517) 485-7711
(517) 485-9408 fax
EMail: derek@kindsvatterassociates.com
www.kindsvatterassociates.com

Kindsvatter, Dalling & Associates, Inc. is a strategic initiative government relations and association management specialist firm with a seasoned professional staff whose primary goal is providing clients with business management services and legislative representation at the state and national level.

From: GOV Newsroom
Sent: Thursday, September 03, 2015 10:09 AM
To: GOV Newsroom
Subject: 9/3 Newsroom
Attachments: image001.jpg; 150903 Newsroom.docx



Thursday, September 3, 2015
NEWS (Click the link to read the full article)

GOVERNOR'S ACTIVITIES

Sexual assault kits press conference
Worthy: $10 million needed to advance rape kit cases (Detroit News)
Michigan law enforcement authorities need $10 million to help deliver justice for at least 1,350 sexual assault victims whose cases languished for years in a Detroit police storage facility, Wayne County Prosecutor Kym Worthy said Wednesday.

Detroit clears massive backlog of untested rape kits (Freep)
Detroit's huge backlog of untested rape kits has been cleared, with nearly all of the more than 11,000 kits discovered in a police storage facility in 2009 now tested, Michigan Gov. Rick Snyder said at a news conference Wednesday.

Prosecutor: 10,000 untested Detroit rape kits now processed (WDIV)
Testing has been completed by the Michigan State Police on more than 10,000 sexual assault kits found in a Detroit police property storage facility. Gov. Rick Snyder and Wayne County Prosecutor Kym Worthy say the next phase of the process is investigating and prosecuting rape cases associated with the kits.

Governor Snyder Addresses Issue of Sexual Assault Kits (9&10 News)
Governor Rick Snyder touched on the issue of sexual assault Wednesday afternoon. He said he plans to stay on top of the issue on college and university campuses. He made the comments at an event Wednesday, giving an update on the status of untested sexual assault kits found in 2009

Governor Rick Snyder: 10K rape kits from Detroit have been tested (WXYZ)
Michigan Governor Rick Snyder says 10,000 rape kits from Detroit have been tested. Snyder was joined by Michigan State Police, Wayne County Prosecutor Kim Worthy and other sexual violence prevention groups.

Backlogged rape kits in Detroit head for further investigation (Reuters)
Most of the 11,000 rape-evidence kits left languishing in a Detroit warehouse have been analyzed since they turned up

several years ago, with DNA matches leading to further investigation in 35 states, Michigan's governor said on Wednesday.

State officials say rape kit backlog almost cleared (Michigan Radio)
Officials say a backlog of more than 11,000 untested rape kits found in an abandoned Detroit crime lab is almost cleared. In some instances, the cases go back more than three decades. But, some victims will still have to wait years for justice. The untested rape kits were discovered six years ago. A combined state, local and private sector effort was launched to clear the backlog.

Testing complete on more than 10,000 abandoned rape kits in Detroit (AP)
Testing has been completed by the Michigan State Police on more than 10,000 sexual assault kits found in a Detroit police property storage facility. Gov. Rick Snyder and Wayne County Prosecutor Kym Worthy say the next phase of the process is investigating and prosecuting rape cases associated with the kits.

State police finish testing 10,000+ shelved rape kits (Fox 17)
Gov. Rick Snyder announced Wednesday that Michigan State Police have finished testing more than 10,000 rape kits that were found in a Detroit warehouse more than five years ago. The Detroit Police Department evidence kits were found in 2009. Of the 10,087 that were tested, 2,616 of them were linked to the FBI's Combined DNA Index System (CODIS), according to a release from the governor's office.

Chinese investment
Chinese company to invest nearly $26 million in Northville Township facility (Oakland Press)
A Chinese bearing manufacturer is investing nearly $26 million to establish a new U.S. headquarters and technical center in Northville Township, creating 125 jobs, Gov. Rick Snyder announced Monday.

Courser/Gamrat
Snyder Staying Out of Sex Scandal (WILX)
After Monday's report that showed Representatives Courser and Gamrat used taxpayer dollars to cover up their affair, Governor Snyder's keeping his mouth shut on whether or not they should resign. He says it's the House's responsibility to decide whether or not to expel the Representatives.

Why Michigan Gov. Rick Snyder isn't publicly calling for Reps. Courser, Gamrat to resign (Mlive)
Michigan Gov. Rick Snyder, unlike some other top Republicans, has not publicly called on GOP state Reps. Todd Courser and Cindy Gamrat to resign over allegations that they misused state resources to hide their extra-marital affair. And the governor, speaking with reporters on Wednesday afternoon, made clear he does not plan to weigh in at this time.

Flags lowered
Mary Lou Parks, Who Served in Michigan House, Dies At 79 (AP)
Former state Rep. Mary Lou Parks, who served six years in the Michigan House representing Detroit, has died. She was 79. Swanson Funeral Home, which is handling arrangements, says Parks died Aug. 23 and details on cause of death weren't released.

Miscellaneous
Kasich talks small government, praises Snyder in Michigan trip (Michigan Daily)
Kasich said he felt a responsibility to help Ohio when he ran for governor, and related his experience with that of Snyder's. "I went in (in Ohio), and we were really just like Governor Snyder, we really were in a deep hole, 20 percent of our operating budget, and so I took on the same approach (as Snyder)," he said.

DEPARTMENT NEWS

AG
Michigan's "Clean Power Plan" could go forward despite knee-jerk, anti-Obama actions (Michigan Radio)

Some days I find myself wishing President Obama would make a speech honoring motherhood and propose a program to honor mothers.

DMVA

Seven member of Congress tour Michigan military bases (MLive)
A U.S. senator and six House representatives visited Selfridge Air National Guard Base on Wednesday.

Seven U.S. Congressional members begin tour of Michigan military bases (Detroit News)

Member of Congress visit Selfridge (127th Wing Public Affairs)
In an historic visit, seven members of Congress toured Selfridge Air National Guard Base today, gaining insight into the diverse missions, capabilities and the future potential of the base.

Michigan's Congressional delegation tours military sites (Macomb Daily)
Seven members of Michigan's Congressional delegation on Wednesday had a unique boots-on-the-ground look at two major military facilities in Macomb County.

Michigan Congress members visit Selfridge Air National Guard Base (Detroit Free Press)

DNR

Michigan gets $951K grant to expand hunting program (Detroit Free Press)
The Michigan Department of Natural Resources has received federal funding to expand a program that pays private owners to let the public use their land for hunting.

Endangered bird numbers rise (AP)
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DEQ

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Lead leaches into 'very corrosive' Flint drinking water, researchers say (MLive)
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Michigan approves $89.5M for energy assistance program (AP)

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'Skimmer' found inside gas pump in Mundy Township (ABC 12)

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Across the country, traffic deaths are on the rise--something law enforcement is aware of, heading into a busy holiday weekend.

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Michigan Secretary of State pulls plug on HP Pact on BAM (WHTC)
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Democrats Demand Lawmakers Identify Budget Cuts for Roads (WMUK)
Republican leaders in the House have floated a plan that would require hundreds of millions of dollars in cuts. But the plan doesn't spell out which programs would lose funding.

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DETROIT NEWS

Detroit Fire Department & Detroit Public Schools team up to train students as first responders (WXYZ)
Today the Detroit Fire Department and Detroit Public Schools will unveil a brand new program to train students as first responders.

Report: Fires cost Detroit millions, displace hundreds (Detroit News)
A new report shows fire and arson remain a huge challenge for Detroit, destroying buildings almost as fast as the city can tear them down.

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Courser, Gamrat no longer deserve the chance to resign (Detroit Free Press)
I am asking you to stop calling for the resignation of state Reps. Todd Courser Cindy Gamrat. They no longer deserve the opportunity to resign.

Testing abandoned rape kits just the first step (Detroit Free Press)
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State Reps. Todd Courser and Cindy Gamrat need to save themselves, their constituents and the state of Michigan from any more of their tawdry antics.

Editor's note: College students get schooled on consent (Detroit News)
When first arriving on a college campus, freshman students have a lot of new things to learn, from navigating dorm life to understanding their class schedule. This year, more students than ever will also have to get schooled in sexual assault.

Finley: Gov. John Kasich, to voters: Pick a 'Dodge' (Detroit News)
John Kasich looks like the right sort of man, and certainly these look like the right sort of times for someone of his record and resume.

Driverless cars: Promising or dangerous (Detroit News)
People tend to forget the past. The challenges and opportunities of the furious present often blot out our memories.

Our Editorial: Invest in energy infrastructure (Detroit News)
Last month's temporary spike in gas prices, caused by an unexpected shutdown of BP's Indiana refinery, has subsided, but it serves as both a warning and reminder of how vulnerable Michigan and much of the Midwest is to an aging energy infrastructure.

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Governor Rick Snyder
REINVENTING MICHIGAN
Getting It Right. Getting It Done.

In the News

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In the News

Thursday, September 3, 2015
NEWS (Click the link to read the full article)

GOVERNOR'S ACTIVITIES

Sexual assault kits press conference
Worthy: $10 million needed to advance rape kit cases (Detroit News)
Michigan law enforcement authorities need $10 million to help deliver justice for at least 1,350 sexual assault victims whose cases languished for years in a Detroit police storage facility, Wayne County Prosecutor Kym Worthy said Wednesday.

Detroit clears massive backlog of untested rape kits (Freep)
Detroit's huge backlog of untested rape kits has been cleared, with nearly all of the more than 11,000 kits discovered in a police storage facility in 2009 now tested, Michigan Gov. Rick Snyder said at a news conference Wednesday.

Prosecutor: 10,000 untested Detroit rape kits now processed (WDIV)
Testing has been completed by the Michigan State Police on more than 10,000 sexual assault kits found in a Detroit police property storage facility. Gov. Rick Snyder and Wayne County Prosecutor Kym Worthy say the next phase of the process is investigating and prosecuting rape cases associated with the kits.

Governor Snyder Addresses Issue of Sexual Assault Kits (9&10 News)
Governor Rick Snyder touched on the issue of sexual assault Wednesday afternoon. He said he plans to stay on top of the issue on college and university campuses. He made the comments at an event Wednesday, giving an update on the status of untested sexual assault kits found in 2009

Governor Rick Snyder: 10K rape kits from Detroit have been tested (WXYZ)
Michigan Governor Rick Snyder says 10,000 rape kits from Detroit have been tested. Snyder was joined by Michigan State Police, Wayne County Prosecutor Kim Worthy and other sexual violence prevention groups.

Backlogged rape kits in Detroit head for further investigation (Reuters)
Most of the 11,000 rape-evidence kits left languishing in a Detroit warehouse have been analyzed since they turned up several years ago, with DNA matches leading to further investigation in 35 states, Michigan's governor said on Wednesday.

State officials say rape kit backlog almost cleared (Michigan Radio)
Officials say a backlog of more than 11,000 untested rape kits found in an abandoned Detroit crime lab is almost cleared. In some instances, the cases go back more than three decades. But, some victims will still have to wait years for justice. The untested rape kits were discovered six years ago. A combined state, local and private sector effort was launched to clear the backlog.

Testing complete on more than 10,000 abandoned rape kits in Detroit (AP)
Testing has been completed by the Michigan State Police on more than 10,000 sexual assault kits found in a Detroit police property storage facility. Gov. Rick Snyder and Wayne County Prosecutor Kym Worthy say the next phase of the process is investigating and prosecuting rape cases associated with the kits.

State police finish testing 10,000+ shelved rape kits (Fox 17)
Gov. Rick Snyder announced Wednesday that Michigan State Police have finished testing more than 10,000 rape kits that were found in a Detroit warehouse more than five years ago. The Detroit Police Department evidence kits were found in 2009. Of the 10,087 that were tested, 2,616 of them were linked to the FBI's Combined DNA Index System (CODIS), according to a release from the governor's office.

Chinese investment
Chinese company to invest nearly $26 million in Northville Township facility (Oakland Press)
A Chinese bearing manufacturer is investing nearly $26 million to establish a new U.S. headquarters and technical center in Northville Township, creating 125 jobs, Gov. Rick Snyder announced Monday.

Courser/Gamrat
Snyder Staying Out of Sex Scandal (WILX)
After Monday's report that showed Representatives Courser and Gamrat used taxpayer dollars to cover up their affair, Governor Snyder's keeping his mouth shut on whether or not they should resign. He says it's the House's responsibility to decide whether or not to expel the Representatives.

Why Michigan Gov. Rick Snyder isn't publicly calling for Reps. Courser, Gamrat to resign (Mlive)
Michigan Gov. Rick Snyder, unlike some other top Republicans, has not publicly called on GOP state Reps. Todd Courser and Cindy Gamrat to resign over allegations that they misused state resources to hide their extra-marital affair. And the governor, speaking with reporters on Wednesday afternoon, made clear he does not plan to weigh in at this time.

Flags lowered
Mary Lou Parks, Who Served In Michigan House, Dies At 79 (AP)
Former state Rep. Mary Lou Parks, who served six years in the Michigan House representing Detroit, has died. She was 79. Swanson Funeral Home, which is handling arrangements, says Parks died Aug. 23 and details on cause of death weren't released.

Miscellaneous
Kasich talks small government, praises Snyder in Michigan trip (Michigan Daily)
Kasich said he felt a responsibility to help Ohio when he ran for governor, and related his experience with that of Snyder's. "I went in (in Ohio), and we were really just like Governor Snyder, we really were in a deep hole, 20 percent of our operating budget, and so I took on the same approach (as Snyder)," he said.

DEPARTMENT NEWS

AG
Michigan's "Clean Power Plan" could go forward despite knee-jerk, anti-Obama actions (Michigan Radio)
Some days I find myself wishing President Obama would make a speech honoring motherhood and propose a program to honor mothers.

DMVA
Seven member of Congress tour Michigan military bases (MLive)

A U.S. senator and six House representatives visited Selfridge Air National Guard Base on Wednesday.

Seven U.S. Congressional members begin tour of Michigan military bases (Detroit News)

Member of Congress visit Selfridge (127th Wing Public Affairs)
In an historic visit, seven members of Congress toured Selfridge Air National Guard Base today, gaining insight into the diverse missions, capabilities and the future potential of the base.

Michigan's Congressional delegation tours military sites (Macomb Daily)
Seven members of Michigan's Congressional delegation on Wednesday had a unique boots-on-the-ground look at two major military facilities in Macomb County.

Michigan Congress members visit Selfridge Air National Guard Base (Detroit Free Press)

DNR
Michigan gets $951K grant to expand hunting program (Detroit Free Press)
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From: Pallone, Maggie (DEQ)
Sent: Wednesday, September 16, 2015 3:26 PM
To: amglasson@house.mi.gov; Neeley, Rep Sheldon; Phelps, Rep Phil; Michelle Carnevale; Andrew Leavitt; Dickinson, Jordan; Bill_Sweeney@stabenow.senate.gov; Anne_Stanski@stabenow.senate.gov; eric_feldman@peters.senate.gov; angeli_chawla@peters.senate.gov; Johnson, Bentley (Peters)
Cc: Posthumus, Dick (GOV); Lange, Michelle (GOV); Ackerman, Darin (GOV); Thelen, Mary Beth (DEQ); Fortin.Denise@epa.gov; Brown, Eric (GOV)
Subject: Briefing for elected officials on Flint water

Senator Stabenow, Senator Peters, Congressman Kildee, Senator Minority Leader Ananich, Representative Phelps and Representative Neeley-
Thank you for your interest in the role of EPA and the State of Michigan in delivering clean, safe water to the residents of Flint. The Michigan DEQ and EPA Region V will be hosting a briefing for elected officials on Flint water Monday, September 21st at 9 AM. The meeting will be at Constitutional Hall (525 W. Allegan St, Lansing, MI).

Tinka Hyde, Director of the Water Division at EPA Region V, and DEQ Director Dan Wyant will provide an overview of our programs and will answer any questions you have.

Please let me know if you, or your staff, will be attending the meeting at your earliest convenience.

Thank you,

Maggie

Maggie Pallone
Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted](cell)
PalloneM@michigan.gov

From: Pallone, Maggie (DEQ)
Sent: Thursday, September 17, 2015 3:55 PM
To: Muchmore, Dennis (GOV); Hollins, Harvey (GOV); Brown, Eric (GOV); Ackerman, Darin (GOV)
Cc: Wurfel, Sara (GOV); Brown, Jessica (GOV)
Subject: Ananich Flint Water Response
Attachments: Flint Water Response.pdf

Here is DEQ's formal response to the Michigan legislators inquiry on Flint water. FYI only, this is going out momentarily. We are also briefing them in person on Monday morning.
Give me a call if you have any questions.
Thanks,
Maggie

From: Feuerstein, Heather (DEQ)
Sent: Thursday, September 17, 2015 3:48 PM
To: Pallone, Maggie (DEQ) <PalloneM@michigan.gov>
Subject: Flint Water Response

Here is the letter to Senator Ananich and Reps Neeley and Phelps.

Heather Feuerstein
Management Assistant to
Maggie Pallone, Deputy Director and
Brad Wurfel, Communications Director
Department of Environmental Quality
517.284.6715

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

September 17, 2015

VIA E-MAIL

The Honorable Jim Ananich
State Senator
State Capitol
P.O. Box 30036
Lansing, Michigan 48909-7536

The Honorable Sheldon Neeley
State Representative
State Capitol
P.O. Box 30014
Lansing, Michigan 48909-7514

The Honorable Phil Phelps
State Representative
State Capitol
P.O. Box 30014
Lansing, Michigan 48909-7514

Dear Senator Ananich and Representatives Neeley and Phelps:

Thank you for your letter of September 10, 2015, regarding water quality in the city of Flint (City). Your interest in this matter is appreciated. The Michigan Department of Environmental Quality (MDEQ) takes seriously its responsibility to ensure safe drinking water for all Michigan residents. The MDEQ maintains a robust public water supply regulatory program through long-standing partnerships with the United States Environmental Protection Agency (USEPA) and the state's regulated public water systems.

With respect to the draft memo referenced in your letter, the MDEQ does not review or receive draft memos from the USEPA, nor would we expect to while it is a draft.

Regulations associated with lead, copper, and corrosion control require communities to monitor water quality at customer taps. The monitoring protocols for sampling home water attempt to represent actual home water use, and they allow the MDEQ to get consistent results for year-over-year comparisons.

It is important to recognize that any home with lead plumbing or service connections will impart some amount of lead to water samples. While the compliance monitoring for lead in the City has not exceeded the federally-established Action Level, either before or after the City switched sources and treatment methods, there has always been

detectable lead in the City's water sampling program for homes that have lead plumbing or service connections. The City's monitoring program's purpose is to show aggregated levels throughout the entire system, not individual home levels.

The law requires the City to provide individual lead results to customers whose homes are sampled for compliance with the Action Level. Each customer with an individual sample result that exceeds 15 parts per billion is provided information on actions they can take to limit lead exposure in their drinking water. System-wide results from the most recent lead compliance monitoring are included each year in the City's annual Consumer Confidence Report, which is provided to customers and available online.

It is important to note that the City performed extensive home water tests for lead and copper last year and this year, and is meeting state and federal drinking water standards. Local health departments also administer annual blood level testing on children in Flint; results show no discernable rise in levels that might be expected if there was an elevated lead level in the City water supply. The City currently has no unresolved violations of state and federal drinking water standards.

The MDEQ continues to work with the City and federal regulators on the shared goal of ensuring safe, reliable drinking water in this community.

I look forward to discussing this issue in greater detail at the meeting next week. If you should have additional questions before then, please contact Ms. Maggie Pallone, Deputy Director, Policy and Legislative Affairs, at 517-284-6715 or pallonem@michigan.gov; or you may contact me.

Sincerely,

Dan Wyant
Director
517-284-6700

cc: U.S. Representative Dan Kildee
Mayor Dayne Walling, City of Flint
Mr. Howard Croft, City of Flint
Dr. Susan Hedman, Regional Administrator, USEPA, Region 5
Mr. Thomas Poy, USEPA, Region 5
Ms. Denise Fortin, USEPA, Region 5
Mr. Michael Schock, USEPA
Mr. Darren Lytle, USEPA
Mr. Marc Edwards, Virginia Tech
Mr. Harvey Hollins, Governor's Southeast Michigan Office
Mr. Bill McBride, Governor's Washington Office
Mr. Eric Brown, Governor's Washington Office
Mr. Jim Sygo, Chief Deputy Director, MDEQ
Ms. Madhu R. Anderson, Deputy Director, MDEQ
Ms. Maggie Pallone, Deputy Director, MDEQ
Ms. Sarah M. Howes, Legislative Liaison, MDEQ
Mr. Brad Wurfel, Communications Director, MDEQ
Ms. Liane Shekter Smith, MDEQ
Mr. Richard Benzie, MDEQ
Mr. Stephen Busch, MDEQ
Mr. Pat Cook, MDEQ

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Friday, September 18, 2015 2:34 PM
To: Pallone, Maggie (DEQ); amglasson@house.mi.gov; Neeley, Rep Sheldon; Phelps, Rep Phil; Michelle Carnevale; Dickinson, Jordan; Bill_Sweeney@stabenow.senate.gov; Anne_Stanski@stabenow.senate.gov; eric_feldman@peters.senate.gov; angeli_chawla@peters.senate.gov; Johnson, Bentley (Peters)
Cc: Posthumus, Dick (GOV); Lange, Michelle (GOV); Ackerman, Darin (GOV); Thelen, Mary Beth (DEQ); Fortin.Denise@epa.gov; Brown, Eric (GOV)
Subject: Re: Briefing for elected officials on Flint water

Hi Maggie,

Senator Ananich has come to the conclusion that this meeting must also have staff from DHHS Childhood Lead Poisoning and Prevention team as well as a medical officer from DHHS, preferably an epidemiologist or a physician that who works with incidences of elevated lead.

Thank you for you help,

Andy

From: "Pallone, Maggie (DEQ)" <PalloneM@michigan.gov>
Date: Wednesday, September 16, 2015 at 3:25 PM
To: "amglasson@house.mi.gov" <amglasson@house.mi.gov>, "Neeley, Rep Sheldon" <SheldonNeeley@house.mi.gov>, "Phelps, Rep Phil" <repphelps@house.mi.gov>, Michelle Carnevale <mcarnevale@senate.michigan.gov>, Andy Leavitt <aleavitt@senate.michigan.gov>, "Dickinson, Jordan" <jordan.Dickinson@mail.house.gov>, "Bill_Sweeney@stabenow.senate.gov" <Bill_Sweeney@stabenow.senate.gov>, "Anne_Stanski@stabenow.senate.gov" <Anne_Stanski@stabenow.senate.gov>, "eric_feldman@peters.senate.gov" <eric_feldman@peters.senate.gov>, "angeli_chawla@peters.senate.gov" <angeli_chawla@peters.senate.gov>, "Johnson, Bentley (Peters)" <Bentley_Johnson@peters.senate.gov>
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[redacted]cell)
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From: Pallone, Maggie (DEQ)
Sent: Monday, September 21, 2015 9:27 AM
To: Pallone, Maggie (DEQ); 'amglasson@house.mi.gov'; Neeley, Rep Sheldon; Phelps, Rep Phil; 'Michelle Carnevale'; 'Andrew Leavitt'; 'Dickinson, Jordan'; 'Bill_Sweeney@stabenow.senate.gov'; 'Anne_Stanski@stabenow.senate.gov'; 'eric_feldman@peters.senate.gov'; 'angeli_chawla@peters.senate.gov'; 'Johnson, Bentley (Peters)'
Cc: Posthumus, Dick (GOV); Lange, Michelle (GOV); Ackerman, Darin (GOV); Thelen, Mary Beth (DEQ); 'Fortin.Denise@epa.gov'; Brown, Eric (GOV)
Subject: RE: Briefing for elected officials on Flint water
Attachments: Flint water FAQs.pdf

Attached please find the Flint Water FAQ page.

Thank you,
Heather Feuerstein
Management Assistant to
Maggie Pallone, Deputy Director and
Brad Wurfel, Communications Director
Department of Environmental Quality
517.284.6715

From: Pallone, Maggie (DEQ)
Sent: Wednesday, September 16, 2015 3:26 PM
To: amglasson@house.mi.gov; Neeley, Rep Sheldon; Phelps, Rep Phil; Michelle Carnevale; Andrew Leavitt; Dickinson, Jordan; Bill_Sweeney@stabenow.senate.gov; Anne_Stanski@stabenow.senate.gov; eric_feldman@peters.senate.gov; angeli_chawla@peters.senate.gov; Johnson, Bentley (Peters)
Cc: Posthumus, Dick (GOV); Lange, Michelle (GOV); Ackerman, Darin (GOV); Thelen, Mary Beth (DEQ); Fortin.Denise@epa.gov; Brown, Eric (GOV)
Subject: Briefing for elected officials on Flint water

Senator Stabenow, Senator Peters, Congressman Kildee, Senator Minority Leader Ananich, Representative Phelps and Representative Neeley-
Thank you for your interest in the role of EPA and the State of Michigan in delivering clean, safe water to the residents of Flint. The Michigan DEQ and EPA Region V will be hosting a briefing for elected officials on Flint water Monday, September 21st at 9 AM. The meeting will be at Constitutional Hall (525 W. Allegan St, Lansing, MI).

Tinka Hyde, Director of the Water Division at EPA Region V, and DEQ Director Dan Wyant will provide an overview of our programs and will answer any questions you have.

Please let me know if you, or your staff, will be attending the meeting at your earliest convenience.

Thank you,

Maggie

Maggie Pallone
Deputy Director
Policy and Legislative Affairs
Department of Environmental Quality
[redacted](cell)
PalloneM@michigan.gov

Frequently Asked Questions:
Water Lead Levels in the City of Flint
September 2015

How can lead get into drinking water?
Lead detections in Flint drinking water exist at the home level. Sampling at the Flint Water Treatment Plant has shown no lead in its treated water. However, this contaminant leaches into water from a home's lead service lines, lead solder, and leaded plumbing materials including fixtures, faucets, and fittings.

Does the city meet federal drinking water standards for lead and copper?
Yes, the city is meeting state and federal guidelines for lead and copper.

The City of Flint has regularly monitored for lead and copper since federal law began requiring it in 1991.

When the City changed water sources in May 2014, state and federal law required the city to sample for lead and copper for a full year to determine how the water may be interacting with residential lead plumbing to increase lead levels. While the city's results show residential lead levels below the federal threshold for immediate response activities, Flint is moving quickly to optimize corrosion control measures in its water system.

Some individual homes showed high numbers for lead. Isn't that a concern?
For the homeowner, yes it is. There is no "safe" level for lead, and while the leading cause of lead poisoning around the country is lead paint, any source of lead ingestion is worthy of concern.

But the State and federal guidelines for lead and copper acknowledge an important reality: Any home that has a lead service connection or lead plumbing will impart some varying amount of lead into the home's water. The only way to eliminate lead in a home water system is to remove lead plumbing or replace lead service connections to the city system.

The lead and copper rule requires the local operator to sample dozens, sometimes hundreds of homes in the service area to get a general sense of how the water supply is interacting with lead plumbing and service connections. The tests are done specifically at homes with lead service connections. Individual results vary and all participants are

Are there other ways the city monitors for lead exposure?
The County Health Department, overseen statewide by the Michigan Department of Health and Human Services, regularly monitors blood levels in children throughout Michigan communities. The leading cause of lead poisoning is exposure to lead paint.

Blood lead level testing results for the 12-month period just after the City of Flint changed its water source (May 2014 – April 2015) showed no significant change in the pattern of blood lead levels in Flint, compared to the previous three years. This data suggests the recent change in water source by the City of Flint has not contributed to an increase in lead exposure throughout the community.

How does the state decide if the water is creating a lead problem?
Compliance with the federal lead rule is based on a 90th percentile calculation. If more than 10 percent of samples report lead above the federal action level of **15 parts per billion**, a water supply has an "action level exceedance." An exceedance is not a violation. It triggers other requirements which could include public notification, additional water quality sampling, and possibly further treatment.

While some of Flint's individual samples exceeded the 15 parts-per-billion lead action level, compliance is based on **the 90th percentile of samples**. The City of Flint's 90th percentile level has ranged between 0 parts per billion in 2008 and 2011, and 15 parts per billion in 1992, but never exceeded the action level.

The two most recent sampling periods, in 2014 and 2015, were 6 parts per billion and 11 parts per billion, respectively.

Did the city use <u>every</u> sample they got back?
Sampling requirements for lead and copper are designed to target the most common pathways to lead ingestion in homes with the least protection. The sample must be collected from a commonly used kitchen or bathroom tap, and in accordance with the provided sampling instructions. Homes that employ filtration or additional treatment cannot be included. Samples must also be collected within the established monitoring period.

I have a lead service connection or lead plumbing. What should I do?
Replacement is the only way to eliminate lead exposure. However, here are some interim steps homeowners can take to reduce it:

Flush pipes before drinking, and only use cold water for consumption.

The more time water has been sitting in your home's pipes, the more lead it may contain. When water in a particular faucet has not been used for six hours or longer, "flush" cold-water pipes by running the water until it becomes as cold as it will get. This could take five to 30 seconds if there has been recent water use elsewhere in the home, such as showering or flushing toilets. Otherwise, it could take two minutes or longer.

Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead.

Who is responsible for replacement of leaded materials?

Replacement of service pipes on private property and any leaded plumbing materials within the home is a **homeowner's responsibility**. The City of Flint owns the service pipe from the water main to the curb stop valve, and that is **the City's responsibility**. This valve is normally located two feet in from the street curb. From there to the house is private property and the responsibility of the homeowner.

Why doesn't the city at least replace its portion of lead service lines?

Partial lead service line replacement has been shown to mobilize more lead and make the situation worse. Only full lead service line replacement has been demonstrated effective in achieving long-term reductions in drinking water lead levels.

What is the City's timeline for installation of corrosion control treatment?

The federal government allows the steps to complete the installation of optimal corrosion control treatment and follow-up monitoring to take up to five years.

However, the City of Flint has committed to completing installation of Optimized Corrosion Control Treatment in **less than six months**.

What will happen when Flint joins the Karegnondi Water Authority next year?

The City has committed to having Optimized Corrosion Control Treatment in place prior to its connection with the Karegnondi Water Authority (KWA). The water provided by KWA will come from a new source, Lake Huron. The city will continue its lead and copper sampling every six months. Additionally, the city's water treatment plant will continue to operate with uninterrupted Optimized Corrosion Control Treatment.

How long would it take to replace lead service lines throughout Flint?

The city has about 32,900 service connections in total. **More than 15,000** of these connections are considered lead service lines. Even if many crews were contracted, it would likely take up to 15 years to complete this work.

What would it cost to replace the lead service line at my house?

Average costs to replace a lead service line at an individual home range from $2,000 to $8,000. Costs vary depending on the length and size of service line that is needed, as well as the ground cover and soil conditions encountered.

With more than 15,000 lead service lines at an estimated average cost of $4,000 for each replacement, total cost could **be $60 million or more**.

From: Hertel, Elizabeth (DCH)
Sent: Thursday, September 24, 2015 1:08 PM
To: Ackerman, Darin (GOV)
Subject: Fwd: Hurley Hospital's bulletin regarding Flint water
Attachments: image007.jpg; image008.png; image005.jpg

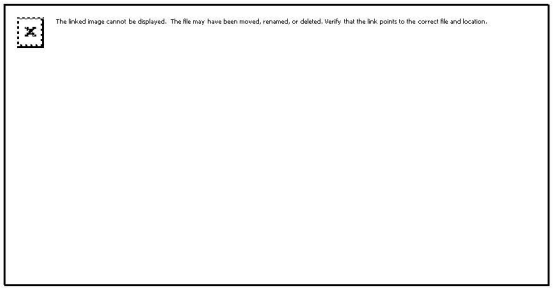
Sent from my iPhone

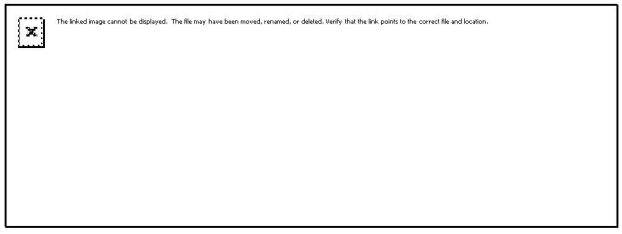
Begin forwarded message:

> **From:** "Lasher, Geralyn (DCH)" <lasherg@michigan.gov>
> **Date:** September 24, 2015 at 12:26:52 PM EDT
> **To:** "Lyon, Nick (DCH)" <LyonN2@michigan.gov>, "Grijalva, Nancy (DCH)" <GrijalvaN@michigan.gov>, "Becker, Timothy (DCH)" <beckert1@michigan.gov>, "Minicuci, Angela (DCH)" <MinicuciA@michigan.gov>, "Eisner, Jennifer (DCH)" <EisnerJ@michigan.gov>, "Hertel, Elizabeth (DCH)" <HertelE@michigan.gov>, "Robinson, Mikelle (DCH)" <RobinsonM18@michigan.gov>, "Moran, Susan (DCH)" <MoranS@michigan.gov>
> **Subject: FW: Hurley Hospital's bulletin regarding Flint water**
>
> Mikelle has been told the Genesee Health Department will also be at the press conference today in Flint with the below groups. They have put together a fact sheet on lead and water that they will be sending us this afternoon.
>
> Angela and I have just gotten off the phone with Nancy Peeler and Bob Scott and are putting together talking points about this "study" that the physicians will be discussing that claims an increase in EBL in children since the change to the water system source.
>
> DEQ will be answering the questions as to why the city cannot just switch back to the Detroit system and how that won't solve the problem. We will answer the health questions.
>
> The City of Flint is also issuing a water advisory today to educate residents and has also asked the Governor for $30 million. http://www.mlive.com/news/flint/index.ssf/2015/09/flint_will_issue_lead_advisory.html#incart_m-rpt-2
>
> ---
>
> **From:** Murray, David (GOV)
> **Sent:** Thursday, September 24, 2015 11:47 AM
> **To:** Lasher, Geralyn (DCH) <lasherg@michigan.gov>; Minicuci, Angela (DCH) <MinicuciA@michigan.gov>; Eisner, Jennifer (DCH) <EisnerJ@michigan.gov>; Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Agen, Jarrod (GOV) <AgenJ@michigan.gov>; Wurfel, Sara (GOV) <WurfelS@michigan.gov>
> **Subject:** Hurley Hospital's bulletin regarding Flint water
>
> Team,
>
> Here's the media bulletin issued by Hurley Hospital in Flint about the lead blood levels press conference this afternoon. I've reached out to Hurley's communications team, which has

promised to send me whatever it has shared with the media on an embargoed basis. I'll forward that as soon as I receive it.

Dave





Media Alert

FOR IMMEDIATE RELEASE

WHO: **Genesee County Medical Community**, including Hurley Medical Center, Greater Flint Health Coalition, Mott Children's Health Center, Hamilton Community Health Network & Genesee County Medical Society

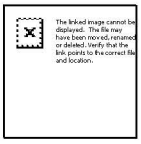
WHAT: Press conference to address medical community's concerns regarding lead levels in the city of Flint's water supply and appropriate precautionary measures.

WHEN: **3pm, Today, September 24th, 2015**

WHERE: Hurley Medical Center, Charles White Conference Center

Media Note: Please enter on the Sixth Avenue entrance and check in with front desk upon arrival to be escorted to the Charles White Conference Center.

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted], mobile
Twitter:@michigandmurray



From: Murray, David (GOV)
Sent: Thursday, September 24, 2015 2:02 PM
To: Ackerman, Darin (GOV)
Subject: FW: Data
Attachments: Pediatric Lead Exposure Flint Water 092415 FINAL.pdf

Thanks, Darin!

From: [redacted] [mailto:[redacted] **On Behalf Of** Angela Wittrock
Sent: Thursday, September 24, 2015 1:44 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: Fwd: Data

---------- Forwarded message ----------
From: **Andy Leavitt** <aleavitt@senatedems.org>
Date: Thu, Sep 24, 2015 at 1:41 PM
Subject: Data
To: Angela Wittrock <awittrock@senatedems.org>

Hey Angela,

Sorry for the delay. Dr. Mona Hanna-Attisha wanted to make a few changes to one of her slides.

Andy

PEDIATRIC LEAD EXPOSURE IN FLINT, MI: CONCERNS FROM THE MEDICAL COMMUNITY

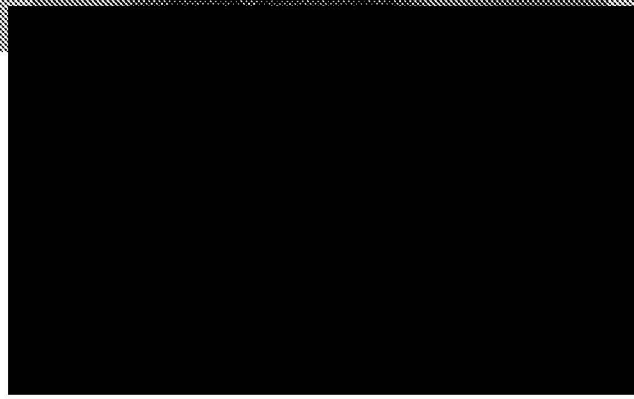
(this will not be written. I will introduce myself, Dr Reynolds can introduce himself and then I will say that we are here as a medical communtiy representing: GFHC, GCMS, Hurley Med Center, Hamilton Health Network)

THANK YOU'S

(this will not be written.

Thank you to Hurley for hosting this press conference, TY to grassroots organizers, prof Edwards and virginia tech, state and federal agencies involved in keeping our water safe, the city for being concerned and taking action, and health department for ensuring the safety of the entire population??

Introducing Makayla*



- 12 month old girl (DOB 8/15/2014) presented last week for her 1 year old check up. No concerns.
- Lives with single mom and 2 older siblings in west side (48504). Formula from WIC; powder mixed with warm tap water.
- Physical exam and development are normal. Makayla receives her 1 year old vaccines and routine lead and hemoglobin screening.
- *A couple days later, lead level comes back as 6 ug/dL.*

*Hypothetical scenario

Blood lead level of 6 ug/dL….

- Blood lead levels (BLL) above 5 ug/dL are considered elevated blood lead levels (EBL)
- Just a few years ago (2012), 10 ug/dL was cutoff
- Increasing evidence shows NO safe blood lead level
- Disproportionately impacts low income children
- Primary prevention is most important
  - Prevents exposure before it occurs!

Primary Prevention

- "Because no measurable level of blood lead is known to be without deleterious effects, and because once engendered, the effects appear to be irreversible in the absence of any other interventions, public health, environmental and housing policies should encourage PREVENTION of all exposure to lead."

"Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention." 2012 CDC Advisory Committee on Childhood Lead Poisoning Prevention.

What will happen to Makayla?

- Vast evidence supports increased likelihood of:
  - Decrease in IQ
    - An increase in BLL from 1 to 4 ug/dL, drops mean IQ -3.7 points
  - Small change in mean IQ, shifts entire population IQ distribution
    - Reduces high achievers IQs (>130) and increases kids with low IQs (<70)
    - Implications for early intervention, special education services, employment, incarceration, life achievement, etc

Lanphear BP et al., Low-level environmental lead exposure and children's intellectual function: an international pooled analysis. Environ Health Perspect, 2005. 113:894-9.
Fewtrell LJ, Pruss-Ustun A, Landrigan P, and Ayuso-Mateos JL, Estimating the global burden of disease of mild mental retardation and cardiovascular diseases from environmental lead exposure. Environmental Research, 2004. 94:120-33.

Behavioral Burden

- Increased likelihood of :
  - ADHD behaviors
  - Delinquent behaviors and arrests
  - Total arrests and increased rates of arrests involving violent offenses
  - Other health effects: hematologic, cardiovascular, immunologic, endocrine, etc

Wright, JP, KN Dietrich, MD Ris, et al. 2008. Association of prenatal and childhood blood lead concentrations with criminal arrests in early adulthood. *PLoS Med* 5(5): e101

Chen, A, B Cai, KN Dietrich, et al. 2007. Lead exposure, IQ, and behavior in urban 5-7 year-olds: Does lead affect behavior only by lowering IQ? *Pediatrics* 119(3): e650-e658.

Needleman, HL, C McFarland, RB Ness, et al. 2002. Bone lead levels in adjudicated delinquents: A case control study. *Neurotoxicology and Teratology* 24(6):711-717.

The Cost

- "For childhood lead poisoning, $5.9 million in medical care costs, as well as an additional **$50.9 billion** (sensitivity analysis: $44.8–$60.6 billion) per year in lost economic productivity resulting from reduced cognitive potential from preventable childhood lead exposure."

- "The present value of Michigan's economic losses attributable to lead exposure in the 2009 cohort of 5 year-olds ranges from $3.19 (using U.S. blood lead levels) to **$4.85 billion** (using Michigan blood lead levels) per year in loss of future lifetime earnings."

Leonardo Trasande and Yinghua Liu. Reducing The Staggering Costs Of Environmental Disease In Children, Estimated At $76.6 Billion In 2008. *Health Affairs*, 30, no.5 (2011):863-870

The Price of Pollution: Cost Estimates of Environment-Related Childhood Diseases in Michigan. 2010 Report by Michigan Network of Children's Environmental Health

Lead in Water

- Increasing as source of lead because of success in controlling other sources.
- Increasing due to aging water infrastructures, change in water sources, disinfectant uses, etc
- Lots of variability in water lead levels depending on internal and external pipes, use of water, temperature, etc

- Disproportionally impacts developmentally-vulnerable formula-fed infants and pregnant mothers
  - Formula preparation

Triantafyllidou, S., Gallagher. D. and Edwards, M. Assessing risk with increasingly stringent public health goals: the case of water lead and blood lead in children. Journal of Water and Health. doi: 10.2166/wh.2013.067 58-68 (2014).
Edwards, M. Fetal Death and Reduced Birth Rates Associated with Exposure to Lead-Contaminated Drinking Water. Env. Sci. and Tech. 2013 DOI: 10.1021/es4034952

Role of the Pediatrician

- Prevention of everything to optimize children's health
- Lead screening as recommended by CDC and AAP at 1 and 2 years of age
- Inquiry and advocacy

RESEARCH FINDINGS

Results of Pediatric Blood Lead Levels

- **Methods**
  - Data from all blood lead levels processed at Hurley Medical Center
  - HMC Institutional Review Board (IRB) approved
  - All children under 5 years of age
  - Zip codes 48501-48507
  - Two periods of comparison:
    - PRE-SWITCH: January 1, 2013 – September 15, 2013
      - WATER SWITCH APRIL 2014
    - POST-SWITCH: January 1, 2015 – September 15, 2015

Results of Pediatric Blood Lead Levels

- **Methods**
  - Analyzed % Elevated Blood Lead (EBL)
    - EBL = Blood lead Levels > 5 g/dL
  - EBL analysis conducted based on scientific literature (most notably DC lead in water exposure)

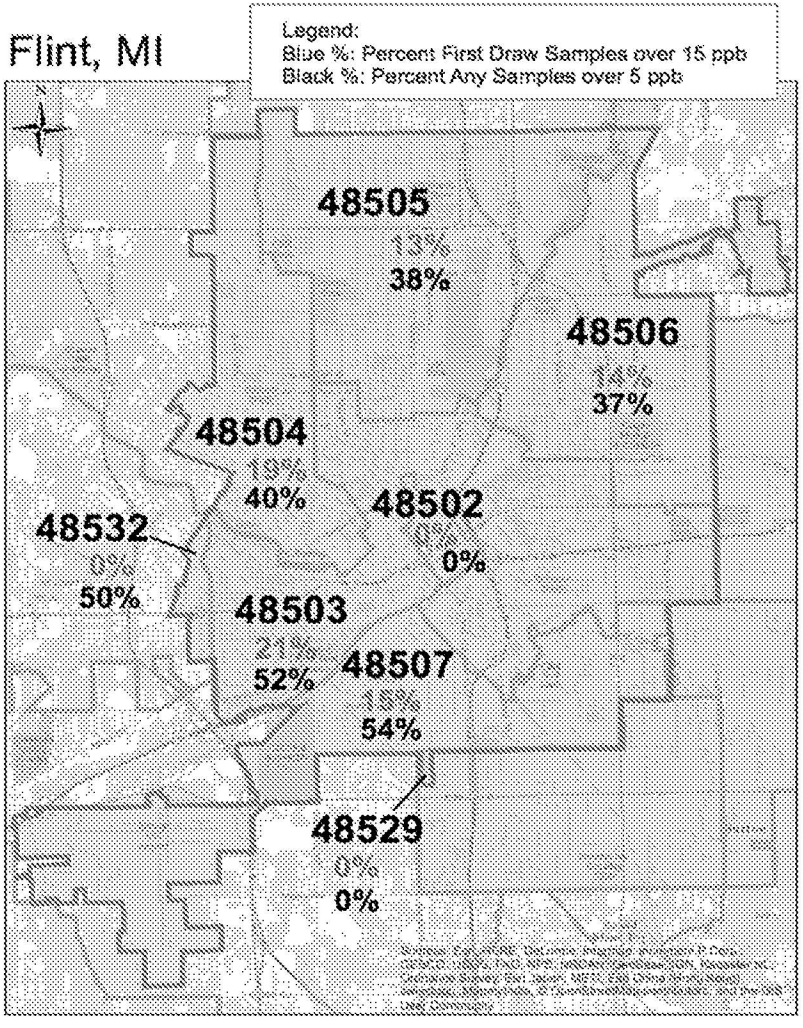
Blood Lead Level Analysis

- Large sample size
  - N= 1746 for Flint children (pre n=906, post n=840)
  - N= 1670 for non-Flint children (pre n=943, post n=727)

Flint results for children 5 years and under:

- PRE-SWITCH % EBL: **2.1%** **(consistent with MDHHS data 2.2)**
- POST-SWITCH % EBL: **4.0%**
- **$p < 0.05$; STATISTICALLY SIGNIFICANT CHANGE**

Zip Codes With High Water Lead



- Focus on zip codes (48503 and 48504) with high water lead levels
- Total n=742, pre n=394, post n=348

Results:

- PRE-SWITCH % EBL: **2.5%**
- POST-SWITCH % EBL: **6.3%**
- **$p < 0.05$; STATISTICALLY SIGNIFICANT CHANGE**

What was rest of county doing?

- Analysis of same time periods for Genesee County children who live outside of City of Flint zips codes (non 48501-48507)
  - N=1670 for non-Flint children (pre n=943, post n=727)

Non-Flint results for children 5 years and under:

- PRE-SWITCH % EBL: **0.6%**
- POST-SWITCH % EBL: **1.0%**
- **p = 0.637; NO STATISTICAL CHANGE**

Blood Lead Level Analysis

- % EBL all children less than 5 years of age

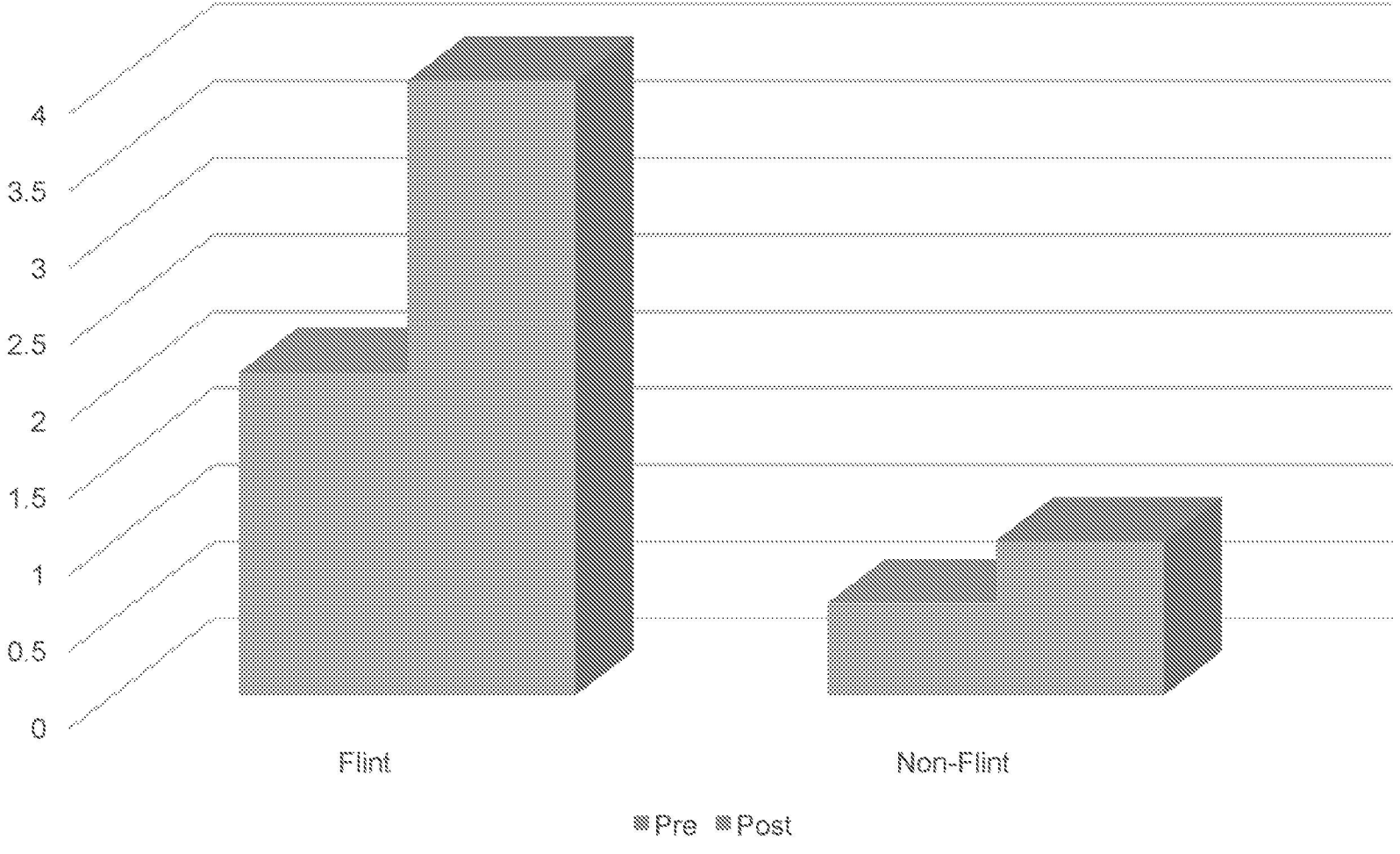
	ALL FLINT (n=1746)	HIGH-water lead FLINT (n=742)	REST OF FLINT (n=1004)	NON-FLINT (n=1670)
PRE-SWITCH	2.1%	2.5%	1.8%	0.6%
POST-SWITCH	4.0%	6.3%	2.4%	1.0%

Blood Lead Level Analysis – 15 month

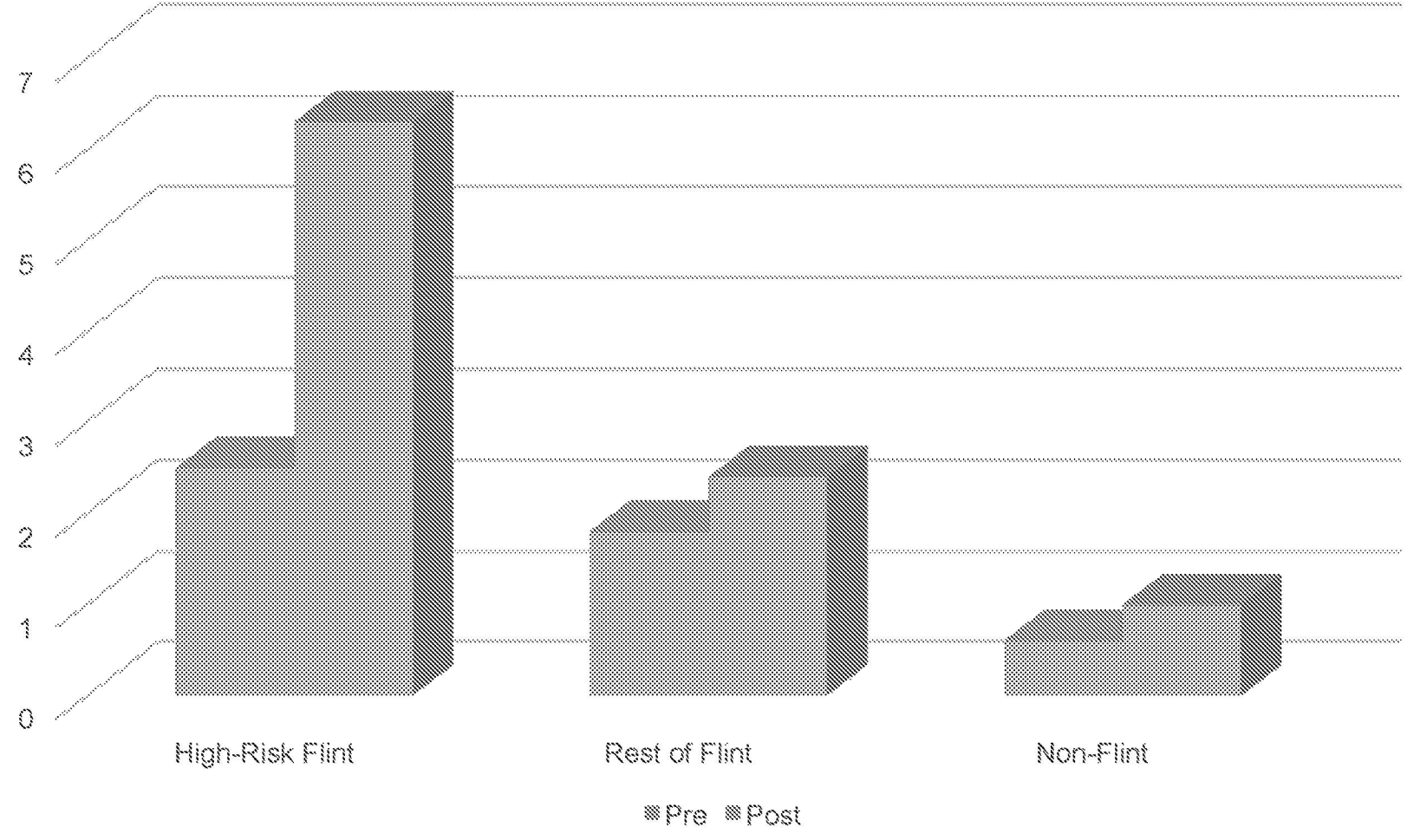
- % EBL children 15 months or less
  - Total Flint n=619, pre n=295, post n=324 (smaller sample size)
  - Total Non-Flint n=816, pre n=443, post n=376

	ALL FLINT (n=619)	HIGH-water lead (n=269)	REST OF FLINT (n=350)	NON-FLINT (n=816)
PRE-SWITCH	1.0%	1.5%	0.6%	0.5%
POST-SWITCH	2.5%	4.4%	1.1%	0.5%

Graphical Summary
Change in % EBL Flint vs Non-Flint



Graphical Summary
Change in % EBL by area



Conclusions from BLL analysis

- Based on our research, % of children with EBL in Flint has increased
  - Most striking increase in zip codes with highest water lead levels
  - Also saw an increase in kids less than 15 months, sample small
- Results underestimate risk:
  - Infants not screened for lead
  - BLL may have peaked before being measured
  - Water usage has dropped

Recommendations

- AAP and CDC recommendation of primary prevention
- Limit further exposure
  - Encourage breast feeding
  - No tap water for high risk groups: infants on formula & pregnant mothers
  - Distribution of lead clearing NSF-approved filters
  - Public education regarding precautions (flushing, cold water, etc)
  - Connect to Lake Huron water source
- Support city's health advisory and health department's public education efforts

And Makayla…

- Asymptomatic now
- But what will her future hold and an entire generation of Flint children if we don't err on the side of safety?

From: Starr, Scott (DTMB)
Sent: Wednesday, September 30, 2015 3:54 PM
To: Posthumus, Dick (GOV)
Cc: Ackerman, Darin (GOV); Lange, Michelle (GOV); Roberts, John (DTMB)
Subject: Flint Water
Attachments: HB 4102 Flint amdts.pdf

Hi Dick,

Per your phone call with John, attached is what Nancy Vriebel gave me today. This is what she believes Sen. Ananich will offer to HB 4102 (FY 15 supplemental) when the bill is taken up on the floor next week.

2 amendments for the supplemental.

1. $1.5 million to help get water filters in the homes of Flint residents. This amount will help 30,000 Flint residents get filters.

2. $12 million to help expedite the goal of sourcing the public water supply from Lake Huron.

*Switching back to the City of Detroit will cost the City of Flint $1.5 million monthly. This money will be used to switch back to that source and/or expedite the construction of the KWA pipeline.

We are asking for money out of the Cleanup and Redevelopment fund. Bottle Deposit escheats (unclaimed deposits that revert to the state) are deposited into the Clean-up and Redevelopment Fund every year. Statute mandates that 80% of this revenue be deposited into the Cleanup and Redevelopment fund.

Fy 14'	$13.6 million revenue
	$16.1 Spent
	$18.1 Balance
Fy 15'	$13.6 million revenue
	$16.6 Spent
	$15.1 estimated balance

The fund will only continue to bring in more money. The percentage of bottles returned has dropped every year since 2007, meaning more money each year in the fund.

From: Posthumus, Dick (GOV)
Sent: Friday, October 02, 2015 10:56 AM
To: Ackerman, Darin (GOV)
Subject: RE: Mtg on Flint Water w/ Sen Ananich (staff)/DM/DP

I believe so. The discussions with him were ongoing all day yesterday. I will check with Dennis

---

From: Ackerman, Darin (GOV)
Sent: Friday, October 02, 2015 10:40 AM
To: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>
Subject: Fwd: Mtg on Flint Water w/ Sen Ananich (staff)/DM/DP

I assume from Sarah Wurfel's email that Jim is in the loop on everything we're announcing today, correct?

Sent from my iPhone

Begin forwarded message:

> **From:** "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
> **Date:** October 2, 2015 at 10:16:54 AM EDT
> **To:** "Posthumus, Dick (GOV)" <Posthumusd@michigan.gov>
> **Cc:** "Ackerman, Darin (GOV)" <ackermand3@michigan.gov>, "Lange, Michelle (GOV)" <LangeM3@michigan.gov>
> **Subject: Re: Mtg on Flint Water w/ Sen Ananich (staff)/DM/DP**
>
> Stay glued to Jim, he's been pretty helpful not withstanding that the issue is explosive and he doesn't want to be a casualty. I think Andy is driving most of it. The young guy is wise beyond his years, and he's politically savvy and is always going to be pitching for Kildee. It seems obvious to me that the feds, the county, the locals and the politicals are looking to throw someone under the bus without being dragged along behind them...
>
> > On Oct 1, 2015, at 8:48 PM, Posthumus, Dick (GOV) <Posthumusd@michigan.gov> wrote:
> >
> > What can I do to help
> >
> > Sent from my iPhone
> >
> > > On Oct 1, 2015, at 5:07 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
> > >
> > > Met with Jim and Andy last night, Flint ministers this morning, Rep. Neely at 11:00, our entire group at 1:30, Dayne Walling at

4:00 and Saxton at 4:30 all on Flint...help...get me out of this mess....

-----Original Message-----

From: Posthumus, Dick (GOV)

Sent: Wednesday, September 30, 2015 1:56 PM

To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>

Subject: RE: Mtg on Flint Water w/ Sen Ananich (staff)/DM/DP

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Sent: Wednesday, September 30, 2015 1:54 PM

To: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>

Cc: Wisniewski, Wendy (GOV) <wisniewskiw@michigan.gov>

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From: Posthumus, Dick (GOV)
Sent: Friday, October 02, 2015 11:12 AM
To: Ackerman, Darin (GOV)
Subject: RE: Mtg on Flint Water w/ Sen Ananich (staff)/DM/DP

You might just touch base with Andy and make sure he is aware
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Sent: Friday, October 02, 2015 10:40 AM
To: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>
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I should be there too

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From: GOV Newsroom
Sent: Thursday, October 08, 2015 9:52 AM
Subject: 10/8 Newsroom
Attachments: 151008 Newsroom.docx; image001.jpg

Thursday, Oct. 8, 2015
NEWS (Click the link to read the full article)

GOVERNOR'S ACTIVITIES

Flint water

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Erin Brockovich highlights the Flint water fight (Detroit Metro Times)
Environmental activist Erin Brockovich took to Facebook on Tuesday to slam Michigan authorities regarding Flint's drinking water controversy — and offered a shoutout to Metro Times and contributor Curt Guyette for covering the issue.

DHHS
Brita spokesperson disputes concerns over water filters (WNEM)
A Brita spokesperson is hoping to put concerns to bed over free water filters being handed out in Flint. This follows a video posted on social media. In the video, a woman who claims to be a representative for Brita says the filters, model number SAFF-100, do not reduce lead, despite packaging which might say otherwise.

LARA
Planned Parenthood not mishandling fetal remains in Michigan, state finds (Mlive)
There is no evidence that Planned Parenthood is illegally handling fetal tissue in Michigan, according to two state departments who reviewed practices after lawmakers called for an investigation.

MEDC
Alger Theater Meets Funding Goal, Will Receive $25K Grant (Detroit Curbed)
The Alger Theater's Patronicity crowd-funding campaign reached its $25K goal late last week, making the historic theater eligible for an additional $25K grant from the Michigan Economic Development Corporation.

Rally for the alleys event will take place tonight (The State News)
Rally for the Alleys, the official crowd-funding kickoff event for the Artist Alleys project in downtown East Lansing, will take place from 4-7 p.m. this evening, Oct. 7 at Ann Street Plaza. The crowdfunding campaign is part of the Michigan Economic Development Corporation's Public Spaces, Community Places program.

MPSC
MPSC Wants Answers on Possible Unsafe Natural Gas Lines (WHTC)
The Michigan Public Service Commission has opened an inquiry into safety issues involving certain natural gas distribution utilities, gas gathering or transmission pipeline operators and gas storage system firms.

LEGISLATIVE NEWS

Forfeiture package sails through Michigan Legislature, requiring police to disclose profits (MLive)
The Michigan Senate on Wednesday voted unanimously to increase civil asset forfeiture reporting requirements for law enforcement agencies and make it harder for the government to keep confiscated property. The seven-bill package represents a first step in a larger effort to reform the state's civil asset forfeiture laws, which allow police agencies to profit from seized property even if the owner is never charged or convicted of a crime.

Medical marijuana dispensaries, taxes and edibles approved by Michigan House (MLive)
The Michigan House on Wednesday signed off on sweeping plans to create a highly-regulated medical marijuana industry and allow patients to purchase the drug at storefront dispensaries, which would be taxed. "These are regulated, inspected facilities where patients can feel safe obtaining their medicine," said Rep.. Mike Callton, R-Nashville, who sponsored the dispensary legislation.

House votes to expand types of medical pot allowed (The Detroit News)
The Michigan House of Representatives approved Wednesday a three-bill package that expands the kinds of medical marijuana patients can ingest and more clearly specifies who can dispense the pot. The legislation represents the latest effort by lawmakers to tweak the state's voter-approved legalization of marijuana for specified medical conditions.

Michigan lawmakers debate banning plastic microbeads in body care products (Crain's Detroit Business)
Lawmakers want to stop companies from making and selling soaps and facial cleansers with plastic microbeads in Michigan. They haven't decided yet how to do it. A bill pending in the state House natural resources committee would ban the use of synthetic plastic microbeads, which are not biodegradable, as exfoliants in personal care products such as shower gels, soaps and toothpastes.

State Senate Committee to Look at Concealed Carry Law for Schools (WHTC)
In the wake of last week's shootings at a community college in Oregon, legislation that would allow properly trained gun owners to carry concealed weapons in Michigan schools will be taken up by the state Senate Judiciary Committee next week.

Tesla test drive: See inside the cars Tesla is using to change Michigan lawmakers' minds (MLive)
Lobbying is commonplace in Lansing, but it doesn't usually take place in high-end electric sports cars. Tesla had three vehicles outside the Michigan Capitol on Tuesday, letting lawmakers and staff take them for speedy spins.

DETROIT

Duggan names new city operations chief (Detroit Free Press)
Mayor Mike Duggan today named longtime associate David Manardo as the city's new group executive for operations to replace outgoing Gary Brown, who was approved today to become the next director of the city's water department. Manardo is executive director of the Detroit Building Authority, a title he will retain but without additional compensation beyond his $250,000 a year salary as he adds to his duties, Duggan's office said.

Detroit's east side beautification effort hits milestone (Detroit Free Press)
After almost six years, an effort to beautify an approximately half-mile string of traffic islands on one of the east side's busier thoroughfares is taking shape in earnest. The Moross Greenway Project, an idea that developed in 2009 among members of the Grosse Pointe Farms Beautification Advisory Commission concerned about the sea of dandelions visible then on the Moross Road traffic islands, is scheduled for its official groundbreaking at 11 a.m. on Wednesday.

Pedestrians dodge cars downtown with traffic lights out (Detroit Free Press)
Pedestrians have had to dodge cars all week with traffic signals out along much of busy Fort Street in downtown Detroit. An underground electrical issue has caused a power outage affecting a handful of traffic signals along Fort Street, according to City of Detroit spokesman John Roach.

OPINION

Our editorial: Good behavior paroles will cut costs (Detroit News)
Fairness alone would argue that, in most cases, an inmate with good behavior should be set free on completing the minimum sentence. That's not always the case in Michigan, and it's helping fuel the state's $2 billion a year in corrections spending.

Waiting for answers, action in Flint water crisis (Freep)
They are still waiting for answers about the water in Flint. And it's hard to say when, or if, those answers are coming. It has been two weeks since a hospital researcher found that more Flint kids had been lead poisoned since the city switched its municipal water supply.

Rep. Greig and Sen. Bieda: Stop flow of microbeads into Great Lakes and break toxic chain (Mlive)
Our Great Lakes are threatened by a dangerous new source of pollution: microplastics, also known as microbeads. Although many who use them every day are unaware, personal care products (including many toothpastes and facial scrubs) contain thousands of minuscule bits of plastic known as microplastics.

Moss: Mich. Supreme Court shuts door on young readers (Detroit News)
Last week the Michigan Supreme Court denied leave to appeal in this state's groundbreaking Right to Read lawsuit. In so doing, the justices slammed shut the courthouse doors to our most vulnerable children — those who cannot read.
Finley: Does the U.S., Obama stand with Israel? (Detroit News)
Does America still have Israel's back? That's the question Israelis are asking now that the nuclear agreement with Iran is a done deal. The pact represents the biggest break in Israel/U.S. relations in decades. Prime Minister Benjamin Netanyahu lobbied hard and unsuccessfully for its defeat in Congress, rightly worried that it puts Iran on a direct party to a nuclear weapon.

#####

Governor Rick Snyder
REINVENTING MICHIGAN
Getting It Right. Getting It Done.

In the News

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found elevated levels of lead in the city's children. "We recognize this is a serious situation, lead exposure is the issue," said Michigan Department of Environmental Quality director, Dan Wyant.

Erin Brockovich highlights the Flint water fight (Detroit Metro Times)
Environmental activist Erin Brockovich took to Facebook on Tuesday to slam Michigan authorities regarding Flint's drinking water controversy — and offered a shoutout to Metro Times and contributor Curt Guyette for covering the issue.

DHHS
Brita spokesperson disputes concerns over water filters (WNEM)
A Brita spokesperson is hoping to put concerns to bed over free water filters being handed out in Flint. This follows a video posted on social media. In the video, a woman who claims to be a representative for Brita says the filters, model number SAFF-100, do not reduce lead, despite packaging which might say otherwise.

LARA
Planned Parenthood not mishandling fetal remains in Michigan, state finds (Mlive)
There is no evidence that Planned Parenthood is illegally handling fetal tissue in Michigan, according to two state departments who reviewed practices after lawmakers called for an investigation.

MEDC
Alger Theater Meets Funding Goal, Will Receive $25K Grant (Detroit Curbed)
The Alger Theater's Patronicity crowd-funding campaign reached its $25K goal late last week, making the historic theater eligible for an additional $25K grant from the Michigan Economic Development Corporation.

Rally for the alleys event will take place tonight (The State News)
Rally for the Alleys, the official crowd-funding kickoff event for the Artist Alleys project in downtown East Lansing, will take place from 4-7 p.m. this evening, Oct. 7 at Ann Street Plaza. The crowdfunding campaign is part of the Michigan Economic Development Corporation's Public Spaces, Community Places program.

MPSC
MPSC Wants Answers on Possible Unsafe Natural Gas Lines (WHTC)
The Michigan Public Service Commission has opened an inquiry into safety issues involving certain natural gas distribution utilities, gas gathering or transmission pipeline operators and gas storage system firms.

LEGISLATIVE NEWS

Forfeiture package sails through Michigan Legislature, requiring police to disclose profits (MLive)
The Michigan Senate on Wednesday voted unanimously to increase civil asset forfeiture reporting requirements for law enforcement agencies and make it harder for the government to keep confiscated property. The seven-bill package represents a first step in a larger effort to reform the state's civil asset forfeiture laws, which allow police agencies to profit from seized property even if the owner is never charged or convicted of a crime.

Medical marijuana dispensaries, taxes and edibles approved by Michigan House (MLive)
The Michigan House on Wednesday signed off on sweeping plans to create a highly-regulated medical marijuana industry and allow patients to purchase the drug at storefront dispensaries, which would be taxed. "These are regulated, inspected facilities where patients can feel safe obtaining their medicine," said Rep.. Mike Callton, R-Nashville, who sponsored the dispensary legislation.

House votes to expand types of medical pot allowed (The Detroit News)
The Michigan House of Representatives approved Wednesday a three-bill package that expands the kinds of medical marijuana patients can ingest and more clearly specifies who can dispense the pot. The legislation represents the latest effort by lawmakers to tweak the state's voter-approved legalization of marijuana for specified medical conditions.

Michigan lawmakers debate banning plastic microbeads in body care products (Crain's Detroit Business)
Lawmakers want to stop companies from making and selling soaps and facial cleansers with plastic microbeads in Michigan. They haven't decided yet how to do it. A bill pending in the state House natural resources committee would ban the use of synthetic plastic microbeads, which are not biodegradable, as exfoliants in personal care products such as shower gels, soaps and toothpastes.

State Senate Committee to Look at Concealed Carry Law for Schools (WHTC)
In the wake of last week's shootings at a community college in Oregon, legislation that would allow properly trained gun owners to carry concealed weapons in Michigan schools will be taken up by the state Senate Judiciary Committee next week.

Tesla test drive: See inside the cars Tesla is using to change Michigan lawmakers' minds (MLive)
Lobbying is commonplace in Lansing, but it doesn't usually take place in high-end electric sports cars. Tesla had three vehicles outside the Michigan Capitol on Tuesday, letting lawmakers and staff take them for speedy spins.

DETROIT

Duggan names new city operations chief (Detroit Free Press)
Mayor Mike Duggan today named longtime associate David Manardo as the city's new group executive for operations to replace outgoing Gary Brown, who was approved today to become the next director of the city's water department. Manardo is executive director of the Detroit Building Authority, a title he will retain but without additional compensation beyond his $250,000 a year salary as he adds to his duties, Duggan's office said.

Detroit's east side beautification effort hits milestone (Detroit Free Press)
After almost six years, an effort to beautify an approximately half-mile string of traffic islands on one of the east side's busier thoroughfares is taking shape in earnest. The Moross Greenway Project, an idea that developed in 2009 among members of the Grosse Pointe Farms Beautification Advisory Commission concerned about the sea of dandelions visible then on the Moross Road traffic islands, is scheduled for its official groundbreaking at 11 a.m. on Wednesday.

Pedestrians dodge cars downtown with traffic lights out (Detroit Free Press)
Pedestrians have had to dodge cars all week with traffic signals out along much of busy Fort Street in downtown Detroit. An underground electrical issue has caused a power outage affecting a handful of traffic signals along Fort Street, according to City of Detroit spokesman John Roach.

OPINION

Our editorial: Good behavior paroles will cut costs (Detroit News)
Fairness alone would argue that, in most cases, an inmate with good behavior should be set free on completing the minimum sentence. That's not always the case in Michigan, and it's helping fuel the state's $2 billion a year in corrections spending.

Waiting for answers, action in Flint water crisis (Freep)
They are still waiting for answers about the water in Flint. And it's hard to say when, or if, those answers are coming. It has been two weeks since a hospital researcher found that more Flint kids had been lead poisoned since the city switched its municipal water supply.

Rep. Greig and Sen. Bieda: Stop flow of microbeads into Great Lakes and break toxic chain (Mlive)
Our Great Lakes are threatened by a dangerous new source of pollution: microplastics, also known as microbeads. Although many who use them every day are unaware, personal care products (including many toothpastes and facial scrubs) contain thousands of minuscule bits of plastic known as microplastics.

Moss: Mich. Supreme Court shuts door on young readers (Detroit News)
Last week the Michigan Supreme Court denied leave to appeal in this state's groundbreaking Right to Read lawsuit. In so doing, the justices slammed shut the courthouse doors to our most vulnerable children — those who cannot read.

Finley: Does the U.S., Obama stand with Israel? (Detroit News)
Does America still have Israel's back? That's the question Israelis are asking now that the nuclear agreement with Iran is a done deal. The pact represents the biggest break in Israel/U.S. relations in decades. Prime Minister Benjamin Netanyahu lobbied hard and unsuccessfully for its defeat in Congress, rightly worried that it puts Iran on a direct party to a nuclear weapon.

#####

Governor Rick Snyder
REINVENTING MICHIGAN
Getting It Right. Getting It Done.

In the News

From: Starr, Scott (DTMB)
Sent: Thursday, October 08, 2015 11:31 AM
To: Ackerman, Darin (GOV)
Subject: RE: NEWS UPDATE--Snyder Asks Legislature For $6M To Reconnect Flint To Detroit Water

Internally, we have identified funding sources, and we should have a supplemental request over to them a bit later today---but the Governor hasn't signed off yet. Can you just tell him we will have a request over to them that will include proposed funding sources yet today? Or do you need more to appease him at this point?

From: Ackerman, Darin (GOV)
Sent: Thursday, October 08, 2015 11:11 AM
To: Starr, Scott (DTMB)
Subject: FW: NEWS UPDATE--Snyder Asks Legislature For $6M To Reconnect Flint To Detroit Water

Have we already identified a funding source or do we have options? SML is asking. They mentioned the Michigan Health Endowment Fund, though I don't know that the current statutory language would allow for such.

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

From: gongwerreports@gongwer.com [mailto:gongwerreports@gongwer.com]
Sent: Thursday, October 08, 2015 10:22 AM
To: Michigan_State_Employees_updates@gongwer.com
Subject: NEWS UPDATE--Snyder Asks Legislature For $6M To Reconnect Flint To Detroit Water

Thursday, October 8, 2015, 10:21 AM

Snyder Asks Legislature For $6M To Reconnect Flint To Detroit Water

FLINT – Governor Rick Snyder said today that Flint will reconnect to the Detroit water system and no longer draw water for its residents and businesses from the Flint River, a move that comes in response to insufficient corrosion treatment for the river water causing unsafe levels of lead to leach into the water.

The announcement follows one of the most serious environmental crises to confront the state and a major outcry that Mr. Snyder's administration, and the man he appointed to run the city when it was in a financial emergency, failed to assure the river water – more corrosive than the water from Lake

Huron, where the Detroit system draws its water – was properly treated before making the switch to the river. Testing has shown rising levels of lead in the blood of some children in the city and pockets of the city with lead levels in the water that exceed recognized limits for safety.

Mr. Snyder said it will cost $12 million to shift Flint to Detroit water through next summer, when a new pipeline to Lake Huron is expected to be completed to supply Flint and surrounding areas with its water. He said he is asking the Legislature to supply $6 million. The Mott Foundation will contribute $4 million and the city of Flint will chip in $2 million.

Gongwer News Service will have more on this story in today's Michigan Report.

Please send all correspondence to gongwer@gongwer.com This mailbox is not regularly monitored.

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From: Starr, Scott (DTMB)
Sent: Thursday, October 08, 2015 2:12 PM
To: Ackerman, Darin (GOV); Lange, Michelle (GOV)
Subject: Flint Water $ Breakdown
Attachments: City of Flint Water Funding Solution (3).pdf

Darin,

Per your request, attached is a breakdown on the Flint water funding request.

City of Flint Water - Funding Solution
State of Michigan Commitment

Items in green to not require supplemental appropriations

Agency	GF/GP	Gross	Comments
Filters:			
Health & Human Services	$1,016,000	$1,016,000	AY15 work project
Health & Human Services	$0	$1,000,000	DEQ State Restricted Settlement Funds provided to HHS Emergency Services local office (FY16 appropriation).
Subtotal Filters:	**$1,016,000**	**$2,016,000**	
Reconnect to DSW:			**Reconnection costs ~$1.3m/month x 9 mos. to be shared by state & Flint**
Environmental Quality	$5,000,000	$6,000,000	DEQ State Restricted Settlement Fund of $1m; balance GF/GP
Subtotal Reconnect:	**$5,000,000**	**$6,000,000**	
Testing Costs:			
Environmental Quality	$1,000,000	$1,000,000	Additional tests at state lab; cost per sample: $26
Subtotal Testing:	**$1,000,000**	**$1,000,000**	
Additional Agency Support:			
LARA	$0	$200,000	Support for inspectors to do schools (public and parochial) and health facilities (hospitals, Long Term Care, etc.).
MSHDA	$0	$249,900	Sufficient spending authority already exists
Health & Human Services	$850,000	$850,000	Follow-up on children with elevated blood levels
Environmental Quality	$300,000	$300,000	Home and school inspections.
Subtotal Additional Support:	**$1,150,000**	**$1,599,900**	
Total Commitment	**$8,166,000**	**$10,615,900**	
Total Supplemental Appropriations	**$7,150,000**	**$9,350,000**	

From: Hanley, Farah (DHHS)
Sent: Tuesday, October 13, 2015 3:29 PM
To: Starr, Scott (DTMB); Pallone, Maggie (DEQ); Ruest, Karla (DHHS); Hertel, Elizabeth (DHHS); Ryan, Howard (Treasury); Waters, Frank (LARA); Pohl, Allan (LARA)
Cc: Lange, Michelle (GOV); Ackerman, Darin (GOV)
Subject: RE: HB 4102 Floor Substitute

Small potatoes but the DHHS portion says $850,100 for the GF on page 7 but should be just $850,000 even. The totals carry the $100 as well.

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Sent: Tuesday, October 13, 2015 1:29 PM
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Subject: HB 4102 Floor Substitute

Hi everyone,

Attached is the House floor sub for HB 4102, the supplemental, which includes the Flint water portion. This bill could move in the House as soon as today, so please let me know if your teams see any problems.

Also, please do not share with the outside, since it's my understanding this has not been introduced or made public yet. Thanks.

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Sent: Tuesday, October 13, 2015 3:39 PM
To: Hanley, Farah (DHHS); Pallone, Maggie (DEQ); Ruest, Karla (DHHS); Hertel, Elizabeth (DHHS); Ryan, Howard (Treasury); Waters, Frank (LARA); Pohl, Allan (LARA)
Cc: Lange, Michelle (GOV); Ackerman, Darin (GOV)
Subject: RE: HB 4102 Floor Substitute

Is that taking into account the Alger Co. placeholder?

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From: Heaton, Anna (GOV)
Sent: Thursday, October 15, 2015 2:57 PM
To: Lange, Michelle (GOV); Ackerman, Darin (GOV); Posthumus, Dick (GOV)
Cc: Rospond, Laurie (GOV); Keilen, Alison (GOV)
Subject: Supplemental signing PR for review
Attachments: PR 151015 Flint water supp Signing.docx

Anna Heaton
Public Relations Advisor|Gov. Rick Snyder
o: 517-241-6049|c: [redacted]
@Republicanna

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

Contacts: Sara Wurfel or Dave Murray 517-335-6397	**FOR IMMEDIATE RELEASE** Thursday, Oct. 15, 2015

Gov. Rick Snyder signs bill authorizing funding for Flint to move back to Detroit water system

Temporary reconnection provides best protection for public health

LANSING, Mich. – Gov. Rick Snyder has signed bipartisan legislation that will direct funding to the City of Flint's emergency water services to reconnect the city's water supply to the Great Lakes Water Authority until the Karegnondi Water Authority pipeline is completed.

"This funding is a coordinated response to a serious problem and I'm pleased so many parties came together to help deliver safe drinking water to the city of Flint," Snyder said. "Reconnecting to the Great Lakes Water Authority is only the first step, as the state will continue testing and inspections to ensure Flint families and children have clean water in their homes and schools."

House Bill 4102, sponsored by state Rep. Al Pscholka, authorizes $6 million to move the city back to Detroit's water system until the new pipeline is finished.

In addition to the $6 million:

- $300,000 goes to the Department of Environmental Quality's drinking water and environmental health services;
- $1 million will provide for DEQ to test water samples throughout the reconnection process;
- $1 million allows the Department of Health and Human Services to purchase and distribute water filters to Flint residents;
- $850,000 will aid in follow-up services for children, including lead testing and care for those with abnormal levels;
- $200,000 will fund state plumbing inspections for schools and health facilities.
- The City of Flint city government will provide $2 million toward reconnecting the water supply and the Charles Stewart Mott Foundation has committed $4 million.

The bill was approved unanimously in both the House and Senate and is now Public Act 143 of 2015.

For more information on this and other legislation, please visit www.legislature.mi.gov.

####

From: Shaquila Myers <SMyers@senate.michigan.gov>
Sent: Friday, October 16, 2015 3:47 PM
To: Ackerman, Darin (GOV)
Subject: Bill Signing for HB 4102

Hi Darin,

Do you know if there are any plans for a bill signing ceremony for HB 4102(supplemental/Flint water)? I think Sen. Ananich is interested in attending if the opportunity is available.

Shaquila Myers, MPA
Legislative Director
Senate Minority Leader Jim Ananich
Capitol Building, Room S-105 | Lansing, MI 48909-7536
P: 517.373.1445

Please sign up for our e-news at: Senatedems.com/Ananich
Facebook: jimananich | Twitter: @jimananich

From: Murray, David (GOV)
Sent: Wednesday, October 21, 2015 1:14 PM
To: Ackerman, Darin (GOV); Lange, Michelle (GOV); Posthumus, Dick (GOV)
Subject: Flint Task Force release notification
Attachments: image001.jpg

Hello Legislative Team,

Sara asked that I send this to you for legislative notifications, particularly Sen. Ananich and Reps. Neeley and Phelps. Our goal is to release between 2:15 and 3 p.m., and ask that you wait until at least 2 before notifying.

Thank you!

Dave

Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Experts in public health, water management, environmental protection to focus on steps to protect residents

LANSING, Mich. – Gov. Rick Snyder today announced the creation of an independent advisory task force charged with reviewing actions regarding water use and testing in Flint and offer recommendations for future guidelines to protect the health and safety of all state residents.

Task force members include experts in public health and medicine, water management, and environmental protection from both sides of the aisle, and will be co-chaired by Ken Sikkema of Public Sector Consultants and Chris Kolb, of the Michigan Environmental Council. Also serving will be Dr. Matthew Davis of the University of Michigan Health System, Eric Rothstein, of the Galardi Rothstein Group and Dr. Lawrence Reynolds of Mott Children's Health Center in Flint.

"Transitioning back to the Detroit Water and Sewerage Department-Great Lakes Water Authority is a good first step to protecting public health in Flint, but it's not the last step," Snyder said. "Bringing in outside experts to evaluate our actions and help monitor and advise on potential changes to law, procedures and practices will be key to continuing work on the comprehensive action plan and ensuring safe drinking water for all the residents in Flint and all of Michigan."

Snyder said the administration will fully cooperate with task force members, saying he wants an unbiased report focusing on steps taken in the past and recommendations that could improve practices to ensure all residents have access to safe, clean water.

Ken Sikkema is a senior policy fellow at Public Sector Consultants, where he specializes in public finance, environment, and energy policy. Prior to joining the firm, Sikkema served in both the Michigan House and Senate, culminating with four years as Senate majority leader. He has also served as both an adjunct and visiting professor at Grand Valley State University.

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state House for six years and served six years on the Ann Arbor City Council. He has been president of the MEC for six years.

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Eric Rothstein is a national water issues consultant and principal at the Galardi Rothstein Group. He served as an independent advisor on the creation of the Great Lakes Water Authority. Rothstein also has served as Jefferson County, Alabama's rate consultant and municipal adviser for litigation related to the county's bankruptcy and issuance of $1.7 billion in sewer warrants and led strategic financial planning for the City of Atlanta's Department of Watershed Management. He has more than 30 years of experience in water, wastewater and stormwater utility finance and rate-making assessments.

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Snyder has said reconnecting with the authority is a critical step to resolving water quality issues and addressing related health concerns. It will not immediately resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control.

To best protect public health, state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure. The Michigan Departments of Environmental Quality and Health and Human Services are continuing to provide free water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

####

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
[redacted]
Twitter:@michigandmurray

From: Murray, David (GOV)
Sent: Wednesday, October 21, 2015 1:24 PM
To: Ackerman, Darin (GOV)
Subject: Re: Flint Task Force release notification
Attachments: image001.jpg; image001.jpg

We've announced we were forming the task force. This announces the members.

Sent from my iPhone

On Oct 21, 2015, at 1:20 PM, Ackerman, Darin (GOV) <ackermand3@michigan.gov> wrote:

> Do they already know about this?
>
> Darin Ackerman, Deputy Director
> Legislative Affairs Division
> Office of Governor Snyder
> State Capitol
> Lansing, MI 48913
> Phone: (517) 241-3950
>
> ---
>
> **From:** Murray, David (GOV)
> **Sent:** Wednesday, October 21, 2015 1:14 PM
> **To:** Ackerman, Darin (GOV) <ackermand3@michigan.gov>; Lange, Michelle (GOV) <LangeM3@michigan.gov>; Posthumus, Dick (GOV) <Posthumusd@michigan.gov>
> **Subject:** Flint Task Force release notification
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<image001.jpg>

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Cc: Ackerman, Darin (GOV); Posthumus, Dick (GOV)
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Attachments: image001.jpg; image001.jpg

I let phelps & Neeley know. They have asked for copies of the PR when it goes out.

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Snyder has said reconnecting with the authority is a critical step to resolving water quality issues and addressing related health concerns. It will not immediately resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control.

To best protect public health, state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure. The Michigan Departments of Environmental Quality and Health and Human Services are continuing to provide free water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

####

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office

[redacted] mobile
Twitter:@michigandmurray

From: Andrew Leavitt <ALeavitt@senate.michigan.gov>
Sent: Wednesday, October 21, 2015 2:17 PM
To: Ackerman, Darin (GOV)
Subject: Re: NEWS RELEASE: Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Thanks

From: "Ackerman, Darin (GOV)"
Date: Wednesday, October 21, 2015 at 2:16 PM
To: Andrew Leavitt
Subject: FW: NEWS RELEASE: Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

You already know this, but I always like to double down must to make sure...

Contacts: Sara Wurfel or Dave Murray
517-335-6397

FOR IMMEDIATE RELEASE
Wednesday, Oct. 21, 2015

Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Experts in public health, water management, environmental protection to focus on steps to protect residents

LANSING, Mich. – Gov. Rick Snyder today announced the creation of an independent advisory task force charged with reviewing actions regarding water use and testing in Flint and offer recommendations for future guidelines to protect the health and safety of all state residents.

Task force members include experts in public health and medicine, water management, and environmental protection from both sides of the aisle, and will be co-chaired by Ken Sikkema of Public Sector Consultants and Chris Kolb, of the Michigan Environmental Council. Also serving will

be Dr. Matthew Davis of the University of Michigan Health System, Eric Rothstein, of the Galardi Rothstein Group and Dr. Lawrence Reynolds of Mott Children's Health Center in Flint.

"Transitioning back to the Detroit Water and Sewerage Department-Great Lakes Water Authority is a good first step to protecting public health in Flint, but it's not the last step," Snyder said. "Bringing in outside experts to evaluate our actions and help monitor and advise on potential changes to law, procedures and practices will be key to continuing work on the comprehensive action plan and ensuring safe drinking water for all the residents in Flint and all of Michigan."

Snyder said the administration will fully cooperate with task force members, saying he wants an unbiased report focusing on steps taken in the past and recommendations that could improve practices to ensure all residents have access to safe, clean water.

Ken Sikkema is a senior policy fellow at Public Sector Consultants, where he specializes in public finance, environment, and energy policy. Prior to joining the firm, Sikkema served in both the Michigan House and Senate, culminating with four years as Senate majority leader. He has also served as both an adjunct and visiting professor at Grand Valley State University.

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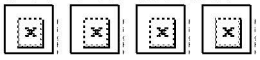
STAY CONNECTED:



This email was sent to ackermand3@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Lange, Michelle (GOV)
Sent: Wednesday, October 21, 2015 6:03 PM
To: Murray, David (GOV); Ackerman, Darin (GOV); Posthumus, Dick (GOV)
Subject: RE: Flint Task Force release notification
Attachments: image001.jpg

Rep. Neeley is interested in how the Governor came up with the composition of the board- is there anything I can tell him in that regard?

Thanks,

M.

From: Murray, David (GOV)
Sent: Wednesday, October 21, 2015 1:14 PM
To: Ackerman, Darin (GOV) <ackermand3@michigan.gov>; Lange, Michelle (GOV) <LangeM3@michigan.gov>; Posthumus, Dick (GOV) <Posthumusd@michigan.gov>
Subject: Flint Task Force release notification

Hello Legislative Team,

Sara asked that I send this to you for legislative notifications, particularly Sen. Ananich and Reps. Neeley and Phelps. Our goal is to release between 2:15 and 3 p.m., and ask that you wait until at least 2 before notifying.

Thank you!

Dave

Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Experts in public health, water management, environmental protection to focus on steps to protect residents

LANSING, Mich. – Gov. Rick Snyder today announced the creation of an independent advisory task force charged with reviewing actions regarding water use and testing in Flint and offer recommendations for future guidelines to protect the health and safety of all state residents.

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####

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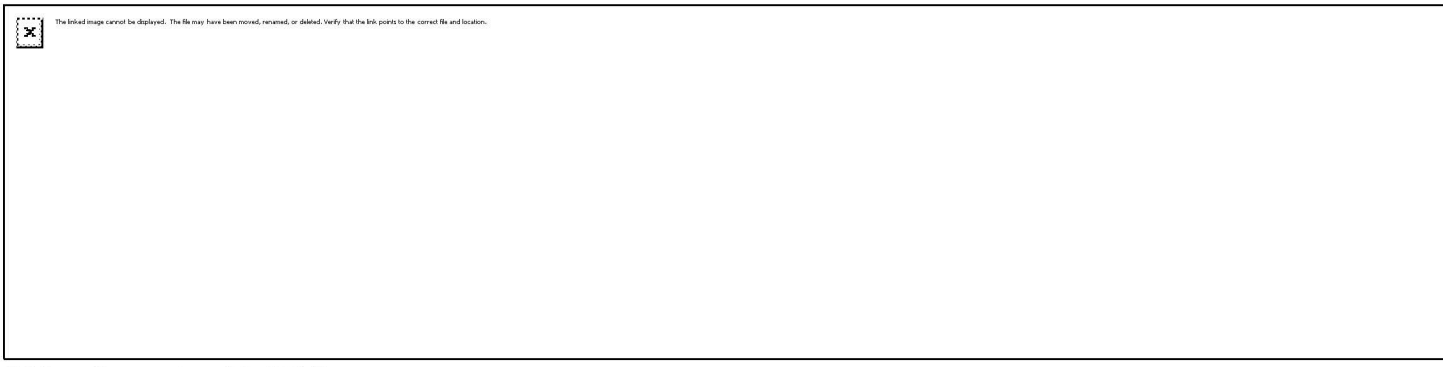
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov

517-335-6397, office
[redacted], mobile
Twitter:@michigandmurray

From: GOV Newsroom
Sent: Friday, November 13, 2015 9:57 AM
To: GOV Newsroom
Subject: 11/13 Newsroom
Attachments: image001.jpg



Friday, November 13, 2015
NEWS (Click the link to read the full article)

GOVERNOR'S ACTIVITIES

Michigan announces net reduction of 2,100 rules since 2011 (AP)
An office created by Gov. Rick Snyder to make government more efficient reports hitting a milestone — the net reduction of more than 2,000 state rules and regulations over four years, including a requirement that child care workers smile.

MISC
State board to consider Gov. Snyder recall petition (Detroit Free Press)
The Board of State Canvassers is to consider proposed language for a recall of Michigan Gov. Rick Snyder, when it meets at the Capitol this morning.

DEPARTMENT NEWS

DEQ
Michigan, neighboring governments work to reduce Lake Erie pollution (Crain's Detroit Business)
Toxic algae bloomed in Lake Erie in huge numbers in August 2014, causing the city of Toledo to issue a "do not drink" advisory. Fears that this was only the beginning of similar occurrences were realized this summer, when the 2015 algal bloom was worse, closing beaches and threatening water supplies. Actions proposed by the state include: Monitoring and studying the causes of harmful algal blooms because (according to the Michigan Department of Environmental Quality) they are "not well understood."

'Water is a human right,' Democrats say with new bills addressing Flint crisis, Detroit shutoffs (Mlive)
"There's a moral goal here," said Rep. Sheldon Neeley, D-Flint, urging the Snyder administration to consider the package. Neeley plans to introduce legislation that would require the Michigan Department of Environmental Quality to collect water samples using federally-approved procedures. His bill would prohibit a sampling procedure known as "pre-flushing," which can lower lead level readings.

Flint may have failed to follow US water testing rules (The Detroit News)

Drinking water testing protocols call for cities to target neighborhoods most likely to have homes with lead connections and plumbing — called Tier 1 areas — since they run a higher risk of having contaminated water. A letter sent to Flint on Nov. 9 by Michigan's Department of Environmental Quality indicates state officials are unsure if the city did so in samples taken over the first half of 2015.

DHHS

DHHS improving technology for caseworkers (Lansing State Journal)

Nick Lyon, director of the Michigan Department of Health & Human Services formed this spring through the merger of the departments of Community Health and Human Services, told a legislative panel Thursday that a shared case management system was one of "five key infrastructure advancements" he was pushing as he continued work on fully integrating the two departments.

DNR

DNR launches campaign to keep chronic wasting disease from U.P. (Up North Live)

The Michigan Department of Natural Resources has launched a campaign to keep chronic wasting disease (CWD) from reaching the Upper Peninsula. CWD affects the central nervous system and is fatal to white-tailed deer, mule deer, elk and moose.

State urges hunters to help keep deer disease out of UP (Michigan Radio)

The Michigan Department of Natural Resources has launched an education campaign to try to keep chronic wasting disease from spreading to the Upper Peninsula. The disease affects the central nervous system and is always fatal to white-tailed deer, mule deer, elk, and moose, according to the DNR. And there is no known treatment.

LARA

Michigan announces net reduction of 2,100 rules since 2011 (AP)

Department of Licensing and Regulatory Affairs Director Mike Zimmer said he was "extremely thrilled" to have 2,000 fewer rules, saying that revisiting thousands of regulations — many of which had not been reviewed in decades — is part of a broader effort to alleviate barriers to business without risking citizens' health and safety. Of the state's 16 departments, LARA had the most net rule reductions, 642, because it has the most regulations due to its role

MDOC

Inmates may pay less to phone home (Ionia Sentinel-Standard)

A new mandate by the FCC may make it cheaper for prison and jail inmates to call their loved ones. According to Michigan Department of Corrections Communications Representative Holly Kramer, phones calls for inmates currently cost between 18 to 23 cents a minute, which can add up to $3.45 for a standard 15 minute call.

MDOT

MDOT Open House Seeks Community Input On US-23 Project (WHMI)

An open house showcased aesthetic options for the upcoming US-23 corridor improvement project and took public feedback. The Michigan Department of Transportation held the open house at the Northfield Township Hall on Thursday and drew in a crowd of interested residents, commuters and community members.

M-DOT holding webinar on changes to existing 25-year-plan (WWMT)

Just days after Governor Rick Snyder signed a $1.2 billion road funding bill into law, the Michigan Department of Transportation is changing its existing 25 year plan. The plan--called MI Transportation Plan: Moving Michigan Forward, was created 10 years ago to forecast transportation challenges from 2005 to 2035.

Meeting slated for U.S. 31 bridge project in Michigan (TI News Daily)

The Michigan Department of Transportation (MDOT) has scheduled an informational public meeting on Nov. 24 to discuss a upgrade project for the U.S. 31 bascule bridge in Charlevoix in northern Michigan. The project, scheduled to start in late 2016, will involve painting the bridge's steel superstructure, repairing mechanical and electrical systems and performing other improvements to the bridge. The work is estimated be finished by June 2017.

Public invited to meeting to discuss work on Charlevoix bridge (Mi News 26)
Michigan Department of Transportation is holding an informational meeting to discuss the bridge work with members from the Gaylord Transportation Service Center on hand to present schedules and to listen to comments and suggestions from the public.

MDOT finishes project to solve crash problems at Tulip City Truck Stop on M-40 (WXMI)
A project meant strictly to solve a safety problem has been completed on M-40 south of I-196. Several solutions for the problem were floated over the years, including roundabouts, which nobody liked, said Michigan Department of Transportation spokesperson Nick Shirripa. Aside the high cost, the idea required some backtracking for drivers leaving the truck stop.

MSHDA
MSHDA awards $83,448 to help eliminate blight (Up Matters)
The Michigan State Housing Development Authority awarded a $83,448 Community Development Block Grant to Marquette County and Houghton County that will help demolish four to five blighted residential structures.

MSP
Trooper Chad Wolf honored with memorial at Genesys hospital (Mlive)
Thursday, Nov. 12, more than a dozen police officers gathered with Bikes on the Bricks officials and family members of fallen Michigan State Trooper Chad Wolf to unveil a granite, laser-etched bench that honors Wolf's life.

MVAA
MVAA Spreads Information to Vets Regarding Benefits (WBKB)
The community was joined in celebrating and honoring our vets Wednesday by a representative from the Michigan Veterans Affairs Agency. The MVAA decided to send advisors around the state today after Governor Snyder instructed the Department of Veteran Affairs to use this day to coordinate and streamline military benefits for veterans.

SOS
Initial List Puts 14 Republicans, 3 Democrats on Michigan Primary Ballot (Michigan Radio)
The Michigan Secretary of State has released the initial list of Republican and Democratic candidates who will appear on the March 8 presidential primary ballot.

LEGISLATIVE NEWS

'Water is a human right,' Democrats say with new bills addressing Flint crisis, Detroit shutoffs (MLive)
Flint mom Melissa Mays believes her three sons are starting to struggle in school because they drank contaminated city water, and she's worried the full effect of lead poisoning, which can cause irreversible brain damage, will not be known for years.

Bills seek to assure clean, affordable water for all (Detroit Free Press)
Lead contamination of drinking water in Flint and large-scale shutoffs of tap water in Detroit have prompted a package of bills that lawmakers say will ensure clean and affordable drinking water for all Michigan residents.

Lawmakers mull role in halting college sexual assaults (Detroit Free Press)
Even as they heard reports about how universities across Michigan intend to use $500,000 in grant funds to help combat sexual assault, Michigan lawmakers wondered if they should be doing more.

State board to consider Gov. Snyder recall petition (Detroit Free Press)
The Board of State Canvassers is to consider proposed language for a recall of Michigan Gov. Rick Snyder, when it meets at the Capitol this morning.

DETROIT

Detroit school overhaul unlikely by end of year (Detroit News)
House School Aid Subcommittee Chairman Tim Kelly said Thursday it's unlikely state lawmakers can approve by the end of this year the overhaul Gov. Rick Snyder wants for the troubled Detroit Public Schools.

Parents ask DPS: Why don't our kids have teachers or textbooks? (WXYZ)
Some classes have no teachers, others have no textbooks. How are kids supposed to learn?
That's the question parents say Detroit Public School leaders weren't answering, so they called on 7 Action News to help them fix their schools.

Detroit casinos, labor at impasse on health care (Detroit News)
Negotiations between Detroit's three casinos and the Detroit Casino Council, the umbrella organization for four employee unions, are stalled over health care. According to a Nov. 4 post on the website of Unite Here Local 24, casino workers have voted to authorize a strike.

OPINION

Williamson: Let's transform Detroit schools (Detroit News)
Sometimes it is just confounding to read the news about schools and education. Currently we are reading about the governor's efforts regarding the Detroit Public Schools. We are also reading about the FBI investigation of corruption in the Education Achievement Authority (EAA) and the plea bargain agreements of some of the education reform fraudsters involved.

Editorial: Michigan growing, but not fast enough (Detroit News)
Michigan has regained 400,000 jobs over the past five years, roughly half what was lost during the Lost Decade at the start of this century. Its economy is growing along with employment, and its business climate ranking has strengthened.

Dickens: Enforce Detroit pot laws with care (Detroit News)
Seven years after the passage of the Michigan Medical Marihuana Act (MMMA), the Detroit City Council is currently considering regulation of medical marijuana facilities within its city limits.

Don't slow Detroit's blight fight (Detroit Free Press)
As a lifelong Detroiter and someone who for the last 27 years has been working to eradicate blight in Detroit, I have learned a few things. First and foremost, blight is a cancer in our city. Without swift and aggressive treatment, it will spread, destroying Detroit neighborhoods. Without a clear strategy and a sense of great urgency, blight will continue to spread faster than it is removed.

Susan J. Demas: What Snyder gets wrong about welders and higher education (MLive)
I've interviewed Gov. Rick Snyder a number of times, but one moment has always struck me.

Is the state to blame for local financial distress? (Michigan Radio)
There is a lot of controversy surrounding Michigan's use of emergency managers. The Flint water fiasco, the decline of the Detroit Public School system -- that all happened under the watch of state-appointed emergency managers.

Anderson: Road funding fix needs to be fixed (Lansing State Journal)
After five years of total control, State Representative Tom Barrett and his Republican colleagues finally got around to dealing with our crumbling roads. Sadly, the plan passed by the Legislature crumbles under the weight of scrutiny. This poorly thought out plan will eventually commit $1.2 billion in new road funding by asking more from average Michiganders and slashing critical services to the tune of $600 million from Michigan's general fund.

#####

Governor Rick Snyder
REINVENTING MICHIGAN
Getting It Right. Getting It Done.

In the News

From: Ackerman, Darin (GOV)
Sent: Monday, November 16, 2015 11:10 AM
To: Ackerman, Darin (GOV)
Subject: 11-16-15

Redacted Text

Flint - We are working on PR campaign re: drinking water with new Mayor. Kildee sent another letter to the Governor asking him to do more to address the issue.
- Suit got filed on Friday afternoon that we violated due process rights when we switched the water.
- Governor wants to meet with the Mayor. Short term goal would be to get city support/Mayor to split the

Redacted Text

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

From: Ackerman, Darin (GOV)
Sent: Monday, November 16, 2015 12:02 PM
To: Posthumus, Dick (GOV)
Subject: 11-16-15 Senior Staff Overview

Hi Dick,

Hopefully you bagged one this morning!

Here's some bullets from today's Senior Staff meeting:

[redacted]

Emmitt (Schedule) – the Governor is coming into the office today. He has a ground-breaking in Northville tomorrow, after which he leaves for RGA in Las Vegas until Thursday. On Friday there is an announcement in Detroit (they didn't say what), and he will be making calls on judgeship appointments.

[redacted]

Roberts (Budget) - Capital Outlay will be moving in legislature, and he doesn't anticipate any major problems. He continues to try and figure out how to best deal with the Hep C issue that presents an additional $100 million cost we had not accounted for. He said his budget team will know more about book closing details by the end of the week and once they do, will have a better line on where the cuts will need to come from.

Ackerman (Leg) – I reminded everyone that we have 9 session days left, at best. I reiterated that the sooner we can decide next steps on DPS the better, so we can hit a goal of trying to move it out of the Senate before Christmas break. I said a realistic timeline goal to get it to the Governor's desk is probably the first week in February, given the House and Senate are only in two full weeks in January. Our window to finish is should be after break and no later than before the budget presentation (was Feb. 11 last year).

[redacted]

waste reduction language, making it difficult to secure "make-up" votes on the D side of the aisle; and (4) Senator Nofs and his caucus still need to put their fingerprints on it (what does this mean in terms of timing and holding stakeholder support together?) I suggested that a more realistic timeline is probably that as I described for DPS in reverse – through the House before Christmas break and through the Senate and to the Governor no later than the first week in February. Certainly we can still push to get it all done, but I thought it best to manage expectations some.

[redacted]

Finally, I shared that I was sensing some puffery from both chambers in the shadow of road funding getting done...meaning, they will feel as though they've just checked another rather large item off the Governor's agenda, so I speculated that we will be playing more defense in the next few weeks as the leaders feel compelled to move bills that either make their members happy or fire-up certain segments of their base. I listed gun bills, coercive abortion and planned parenthood bills as examples.

Hollins (OUI) – Flint - we are working with the new Mayor (Weaver) to implement a public relations strategy to help pass long information to citizens. Kildee sent another letter to the Governor asking him to do more to address the issue, and it is unlikely this pattern will stop. There was a suit filed on Friday afternoon (I didn't catch by whom) saying the state violated due process rights when Flint switched from Detroit's water system. There are efforts underway to set up a meeting between the Governor and Mayor Weaver for relationship-building purposes.

Other/Round Robin:

- Scheduling is starting to work on 2016 - big picture/framework stuff.

- Nat is working on Delta – I told him I am pushing them to take up and run it out of the full senate the week we get back.

- Travis suggested that we save emails on Flint Water because we are going to get sued. He also mentioned that the petition to recall the Governor was rejected and that another one was being filed over the Flint water issue.

- Wurfel mentioned a horrific EAA incident of some kind...I didn't quite catch the details, but it appeared to be different from the FBI investigation stuff. I believe it may have been a suicide by one of the teachers. At any rate, she said she would keep us informed.

Let me know if you need more details on any of the items.

Thanks,

Darin Ackerman, Deputy Director
Legislative Affairs Division

Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

From: Hertel, Elizabeth (DHHS)
Sent: Thursday, November 19, 2015 3:45 PM
To: Ackerman, Darin (GOV); LangeM2@michigan.gov
Subject: Fwd: Flint EBL Data
Attachments: 2015-11-18 - Flint Lead FINAL.pdf; ATT00001.htm; Flint Water Talking Points 111915 V3.docx; ATT00002.htm; Flint EBL Data Press Release.docx; ATT00003.htm

Sent from my iPhone

Begin forwarded message:

> **From:** "Eisner, Jennifer (DHHS)" <EisnerJ@michigan.gov>
> **Date:** November 19, 2015 at 3:15:17 PM EST
> **To:** "Hertel, Elizabeth (DHHS)" <HertelE@michigan.gov>
> **Subject: FW: Flint EBL Data**
>
> FYI
>
> Jennifer Eisner
> Public Information Officer
> Michigan Department of Health and Human Services
> Office: 517-241-2112 or EisnerJ@michigan.gov
> Cell: [redacted]
>
> ---
>
> **From:** Eisner, Jennifer (DHHS)
> **Sent:** Thursday, November 19, 2015 3:07 PM
> **To:** Wurfel, Sara (GOV) <WurfelS@michigan.gov>; Murray, David (GOV) <MurrayD1@michigan.gov>; Brown, Jessica (GOV) <BrownJ53@michigan.gov>; Kennedy, Jordan (GOV) <KennedyJ4@michigan.gov>
> **Cc:** Wurfel, Brad (DEQ) <WurfelB@michigan.gov>; Tommasulo, Karen (DEQ) <TommasuloK@michigan.gov>; Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>
> **Subject:** Flint EBL Data
>
> Good afternoon:
>
> Attached, please find the blood lead level test results for Flint zip codes 48501-48507, as well as a corresponding press release and talking points. With your approval and edits, we are planning to notify external partners tomorrow at 9:30 a.m. then post the report on www.michigan.gov/flintwater and issue the press release at 10 a.m.
>
> Please let us know if you have any questions or concerns.
>
> Thanks and best,
>
> Jennifer Eisner
> Public Information Officer
> Michigan Department of Health and Human Services

Office: 517-241-2112 or Eisner1@michigan.gov
Cell: [redacted]

Michigan Department of Health and Human Services (MDHHS)
Blood Lead Level Test Results for Flint Zip Codes 48501-48507
Summary as of October 30, 2015

Executive Summary

This report is generated by MDHHS to track Blood Lead Level test results in Flint, Michigan.

- Counts on this report include both capillary and venous blood tests. People who have had multiple tests are counted only once.
- Since 10/1/2015, an additional 963 people have been tested in Flint.
- Continued testing efforts by Genessee County Health Department, MDHHS and local medical personnel have identified 18 children with blood lead levels greater than or equal to 5µg/dL since 10/1/2015.
- Three percent of the children younger than 6 years old tested since 10/1/2015 have had blood lead levels greater than or equal to 5µg/dL.
- Additional testing is ongoing. Counts will vary as new results are added.

Number of People Tested for Lead in Flint

Total number of people tested for lead from 1/1/2013 to 4/14/2014	4657
Total number of people tested for lead from 4/15/2014 to 9/30/2015	5017
Total number of people tested for lead since 10/1/2015:	**963**

Children Younger than 6 Years Old with Blood Lead Levels (BLL) ≥5µg/dL

Total number of children tested for lead from 1/1/2013 to 4/14/2014	3811
Number of child BLL test results ≥5µg/dL from 1/1/2013 to 4/14/2014	112
Total number of children tested for lead from 4/15/2014 to 9/30/2015:	4156
Number of child BLL test results ≥5µg/dL from 4/15/2014 to 9/30/2015:	181
Total number of children tested for lead since 10/1/2015:	**385**
Number of child BLL test results ≥5µg/dL since 10/1/2015:	**12**

Adults (18 Years or Older) with Blood Lead Levels (BLL) ≥5µg/dL

Total number of adults tested for lead from 1/1/2013 to 4/14/2014	170
Number of adult BLL test results ≥5µg/dL from 1/1/2013 to 4/14/2014	22
Total number of adults tested for lead from 4/15/2014 to 9/30/2015:	207
Number of adult BLL test results ≥5µg/dL from 4/15/2014 to 9/30/2015:	13
Total number of adults tested for lead since 10/1/2015:	**289**
Number of adult BLL test results ≥5µg/dL since 10/1/2015:	**6**

Children 6 to 17 Years Old with Blood Lead Levels (BLL) ≥5µg/dL

Total number of children tested for lead from 1/1/2013 to 4/14/2014	676
Number of child BLL test results ≥5µg/dL from 1/1/2013 to 4/14/2014	5
Total number of children tested for lead from 4/15/2014 to 9/30/2015:	654
Number of child BLL test results ≥5µg/dL from 4/15/2014 to 9/30/2015:	7
Total number of children tested for lead since 10/1/2015:	**289**
Number of child BLL test results ≥5µg/dL since 10/1/2015:	**6**

Blood Lead Levels in Flint Talking Points
November 18, 2015

Blood Lead Level Testing Results

- The Michigan Department of Health and Human Services is releasing a report regarding blood lead levels in Flint children and adults in zip codes 48501-48507.
- The purpose of the report is to inform residents about blood lead level testing efforts in Flint and provides cumulative total numbers.
- It is not intended to be a technical report but a technical description, and further analysis of the data in the report is underway.
- The data in the report include the total number of tests conducted and the total number of elevated blood lead levels ≥5µg/dL (micrograms per deciliter), broken down by date and age ranges.
    - Specifically, the current report breaks down the data by the 16 months prior to the switch in water source for Flint (January 1, 2013 through April 14, 2014), to the 17 months after the switch (April 15, 2014 through September 30, 2015), and after the lead exposure prevention campaign was initiated by the State in Flint October 1, 2015 to October 30, 2015. These numbers will continue to be updated.
    - The report also breaks down the number of tests and elevated blood lead levels by children younger than 6, children ages 6-17, and adults 18 years and older.
        - Lead exposure for children younger than 6 is of particular concern because they are more sensitive to the effects of lead and tend to absorb more than older children and adults.
- Data in the report includes both capillary and venous blood tests. People who have had multiple tests are counted only once.
- 963 people were tested in Flint between October 1, 2015, and October 30, 2015, 18 children 17 years of age or younger had elevated blood lead levels. Six adults over the age of 18 were identified with elevated blood lead levels during this time as well.
- With these testing results, MDHHS is working closely with the Genesee County Health Department to conduct case management to ensure that these families are receiving the follow up care they need - including additional blood testing and a home investigation to identify and help reduce the potential for additional lead exposure in their environment.
- In addition to this report, MDHHS has zip code level data available by quarter for 48503-48507 by request. Zip codes 48501-48502 do have some cases, but the numbers are too small to release by quarter.

Water Filters and Replacement Filters

- Our first action item is to work closely with our public and private partners to provide water filters to Flint residents and MDHHS clients.
- To meet this priority, the governor identified one million dollars in state funding to purchase water filters for Flint residents.
- The Brita SAFF-100 filters being distributed by the department and GCCARD do meet the NSF/ANSI 53 standards for drinking water treatment units.
- The Brita faucet filtration system we are distributing are National Sanitation Foundation certified to reduce lead in drinking water.
- Free water filters and replacement cartridges are available to current Michigan Department of Health and Human Services clients and Flint residents who are on the Flint water system at four locations:
    - Flint residents who are not current MDHHS clients should visit one of two Genesee County Community Action Resource Department offices to obtain a filter.
        - at 2727 Lippincott and 601 North Saginaw in Flint
    - Current MDHHS clients in the city of Flint should visit their local MDHHS office:
        - At 125 E. Union St. or 4809 Clio Road
- Staff will be onsite at all four locations from 9 a.m. to 4 p.m., Monday through Friday, to distribute filters and assist residents who have questions about proper installation.
- Given the questions and concerns regarding the change in water source in Flint, MDHHS authorized the use of emergency services funding to provide water filters for MDHHS clients receiving assistance in the city of Flint.
- This funding will support active Family Independence Program (FIP), Food Assistance Program (FAP), Child Development and Care (CDC), State Disability Assistance (SDA), State Disability Assistance (SDA), or Social Security Insurance (SSI) recipients so that they can obtain filters that are National Sanitation Foundation (NSF) certified to remove lead and ANSI Standard 53.
- MDHHS has also posted an instructional video on the MDHHS YouTube channel to help residents properly install water filters, and to demonstrate how to replace the original filter when it expires.
    - https://www.youtube.com/watch?v=plsOvmH___0
- MDHHS currently serves approximately 25,000 households in Flint.

Background Information

- Initial analysis of MDHHS data found that blood lead levels of children in Flint have followed an expected seasonal trend; due to small numbers further analysis was initiated.

- While this analysis of blood lead levels in Flint as a whole remains true, after a comprehensive and detailed review down to the zip code level, we have found that the state analysis is consistent with that presented by Hurley.
- Director Lyon is working closely with DEQ and the administration to take active steps to reduce all potential lead exposures in Flint and across the state.
- Our Chief Medical Executive has been in communication with the lead investigator at Hurley Children's Hospital, and we continue to work with Hurley, the city of Flint, local and state leaders to verify and analyze data trends.
- Zip code-level data does show that there has been an increase in elevated childhood blood lead levels in specific communities.
    - This does not conclusively mean that the water source change is the sole cause of the increase, but data does show an association.
    - There is an increased proportion of children with elevated blood levels in several zip codes, particularly 03 and 04. These appear to have increased over the last 1.5 years.
    - Lead exposure can occur from a number of different sources (such as paint, gasoline, solder, and consumer products) and through different pathways (such as air, food, water, dust, and soil).
    - Although there are several exposure sources, lead-based paint is still the most widespread and dangerous high-dose source of lead exposure for young children in the US and Michigan.
- We reviewed MDHHS statewide data using the same methodology used by Hurley, looking at our numbers by zip code and age ranges, and filtering out non-Flint children.
- Routine surveillance of blood lead levels does not analyze data down to the zip code level. Detailed analysis like this occurs when there is reason to focus in on precise locations or populations.
- MDHHS is working closely with the Michigan Department of Environmental Quality, Hurley Children's Hospital, the Genesee County Health Department, and community organizations to initiate further action steps.
- We understand that cost may be a barrier to following the recommendations for drinking water, which is why NSF-certified filters are being distributed to residents on the Flint water system free of charge.
- MDHHS is recommending that residents follow the Public Health Advisory issued by the Genesee County Health Department, as well as take further steps to reduce exposures to all forms of lead in and around their homes.

MDHHS Stats and Facts

- 'High Risk' Zip codes (48503 and 48504)

    - Blood lead level rates among children under six years of age in the high risk zip codes (48503, 48504) were 2.7 times higher than the rest of Genesee County before the switch to Flint River Water.
    - After the switch to Flint River Water, rates in the high risk Zip codes were 3.2 times that of the rest of Genesee County.
- Other Zip codes in Flint
    - Rates of elevated blood lead levels among children under six years of age in other parts of the city of Flint were 2 times that of the rest of Genesee County before the switch to Flint River Water.
    - The magnitude of the elevated rate remained roughly the same during the period after the water source switch.
- Lead abatement through MDHHS was federally funded up until FY14 when Michigan began providing additional funds to abate homes.
- In FY14, $1.25M General Fund was added. In FY15, General Fund was bumped up to $1.75M and FY16, General Fund remains at $1.75M.

Reducing and Removing Lead Exposure

- Use only cold filtered water from the tap for drinking, cooking, and making baby formula. Hot water is more likely to contain higher levels of lead. The lead in household water usually comes from the service line that connects your house to the water main or the plumbing in your house, not from the local water supply.
- In housing built before 1978, it can be assumed that the paint has lead unless tests show otherwise.
- Make sure your child does not have access to peeling paint or chewable surfaces painted with lead-based paint.
- Children and pregnant women should not be present in housing built before 1978 that is undergoing renovation. They should not participate in activities that disturb old paint or in cleaning up paint debris after work is completed.
- Create barriers between living/play areas and lead sources. Until environmental clean-up is completed, you should clean and isolate all sources of lead.
    - Close and lock doors to keep children away from chipping or peeling paint on walls. You can also apply temporary barriers such as contact paper or duct tape, to cover holes in walls or to block children's access to other sources of lead.
- Regularly wash children's hands and toys. Hands and toys can become contaminated from household dust or exterior soil. Both can be lead sources.
- Regularly wet-mop floors and wet-wipe window components. Because household dust is a major source of lead, you should wet-mop floors and wet-wipe horizontal surfaces every 2-3 weeks.

    - Windowsills and wells can contain high levels of leaded dust. They should be kept clean. If feasible, windows should be kept shut to prevent abrasion of painted surfaces or opened from the top sash.
- Take off shoes when entering the house to prevent bringing lead-contaminated soil in from outside.
- Prevent children from playing in bare soil; if possible, provide them with sandboxes. Plant grass on areas of bare soil or cover the soil with grass seed, mulch, or wood chips, if possible.
    - Until the bare soil is covered, move play areas away from bare soil and away from the sides of the house. If you have a sandbox, cover the box when not in use to prevent cats from using it as a litter box. That will help protect children from exposure to animal waste.
- Avoid using makeup, containers, cookware, or tableware to store or cook foods or liquids that are not shown to be lead-free.
- Remove recalled toys and toy jewelry immediately from children.
- Shower and change clothes after finishing a task that involves working with lead-based products such as stained glass, making bullets, or using a firing range.

If possible, shower and change before returning home if your job requires you to work with or around lead. These jobs can include painting, plumbing, and some factory work.

WIC Children

- There are 855 infants participating in WIC in Flint.
- We are working with partners at the United Way to ensure that WIC families have access to water filters and bottled water.
- In homes with infants on WIC, if the household has documentation from an official source documenting unsanitary water supply issues, that family may be eligible to receive ready-to-feed formula. Families should contact WIC to see if they are eligible.
- Each household will be considered on an individual basis.
- WIC cannot cover bottled water.

STATE OF MICHIGAN
DEPARTMENT OF HEALTH AND HUMAN SERVICES
LANSING

RICK SNYDER
GOVERNOR

NICK LYON
DIRECTOR

FOR IMMEDIATE RELEASE
DRAFT

CONTACT: Jennifer Eisner
(517) 241-2112

MDHHS releases new report outlining blood lead levels in Flint

Follow-up care, case management resources continue for families

LANSING, Mich. – The Michigan Department of Health and Human Services today issued data regarding blood lead levels in Flint children and adults. The report is intended to inform residents about blood lead level testing efforts in Flint and provide cumulative total numbers.

"With the progress that we've made in testing and identifying those with elevated blood lead levels, the Department will continue to work closely with the Genesee County Health Department to reach these families and conduct case management to reduce their exposure to lead sources," said Dr. Eden Wells, chief medical executive with the MDHHS. "We will update these numbers on a regular basis and remain diligent in our ongoing outreach and education."

Between October 1 and October 30 of this year, there were 963 people tested in Flint. Of those children tested, 18 children 17 years of age or younger had elevated blood lead levels. Six adults over the age of 18 were identified with elevated blood lead levels during this same timeframe.

The data in the report include the total number of tests conducted and the total number of elevated blood lead levels greater than 5 micrograms per deciliter, and captures both capillary and venous blood tests. People who have had multiple tests are counted only once. The full report is posted online at www.michigan.gov/flintwater and will be updated as more data becomes available.

Last month, MDHHS collaborated with the Genesee County Health Department and local partners to distribute educational resources and informational letter to Flint parents regarding lead testing. GCHD nursing staff are conducting direct outreach to families when an elevated blood lead level has been detected, serving as an important resources by addressing questions and concerns, providing information, and meeting them in their home environment.

MDHHS continues to provide free water filters and replacement cartridges to Flint residents at four locations including the MDHHS Flint offices and the Genesee County Community Action Resource Department. For a full list of locations and hours of distribution, visit www.michigan.gov/flintwater.

To help residents properly install water filters, and to demonstrate how to replace the original when it expires, MDHHS has created an instructional on the MDHHS YouTube channel. For additional updates on Flint water including updates on blood lead levels and testing results, visit www.michigan.gov/flintwater.

# # #

From: Hertel, Elizabeth (DHHS)
Sent: Friday, November 20, 2015 11:12 AM
To: Ackerman, Darin (GOV)
Subject: FW: Flint PR and Suggested Timeline

From: Eisner, Jennifer (DHHS)
Sent: Friday, November 20, 2015 10:46 AM
To: Becker, Timothy (DHHS); Moran, Susan (DHHS); Hertel, Elizabeth (DHHS); Lasher, Geralyn (DHHS); Wells, Eden (DHHS); Minicuci, Angela (DHHS); Granger, Patricia (DHHS)
Subject: RE: Flint PR and Suggested Timeline

This is being held until Monday.

Jennifer Eisner
Public Information Officer
Michigan Department of Health and Human Services
Office: 517-241-2112 or EisnerJ@michigan.gov
Cell: [redacted]

From: Eisner, Jennifer (DHHS)
Sent: Friday, November 20, 2015 8:28 AM
To: Becker, Timothy (DHHS) <beckert1@michigan.gov>; Moran, Susan (DHHS) <MoranS@michigan.gov>; 'Hertel, Elizabeth (DCH) (HertelE@michigan.gov)' <HertelE@michigan.gov>; Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Wells, Eden (DHHS) <WellsE3@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>; Granger, Patricia (DHHS) <GrangerP@michigan.gov>
Subject: RE: Flint PR and Suggested Timeline

Good morning – we're revising the timeline for the press release, so please hold off on notifications for the time being.

Thank you,

Jennifer Eisner
Public Information Officer
Michigan Department of Health and Human Services
Office: 517-241-2112 or EisnerJ@michigan.gov
Cell: [redacted]

From: Eisner, Jennifer (DHHS)
Sent: Thursday, November 19, 2015 12:42 PM
To: Becker, Timothy (DHHS) <beckert1@michigan.gov>; Moran, Susan (DHHS) <MoranS@michigan.gov>; Hertel, Elizabeth (DCH) (HertelE@michigan.gov) <HertelE@michigan.gov>; Lasher, Geralyn (DHHS) <lasherg@michigan.gov>; Wells, Eden (DHHS) <WellsE3@michigan.gov>; Minicuci, Angela (DHHS) <MinicuciA@michigan.gov>; Granger, Patricia (DHHS) <GrangerP@michigan.gov>
Subject: Flint PR and Suggested Timeline
Importance: High

All –

Attached for your review please find a draft press release and corresponding talking points regarding the Flint blood lead level data.

Here's a suggested timeline to issue the press release tomorrow morning:

- This afternoon – Brief DEQ
- This afternoon – Update Governor's Office
- Friday, 9:30 a.m. – External notifications (Dr. Wells)
  - Genesee County Health Department
  - Dr. Mona Hannah-Attisha
  - Others?
- Friday, 10 a.m. – Report posted on www.michigan.gov/flintwater
- Friday, 10 a.m. – MDHHS issues press release

With your edits, we will send over to DEQ and Gov's comms.

Thank you,

Jennifer

From: Wisniewski, Wendy (GOV) on behalf of Agen, Jarrod (GOV)
Sent: Tuesday, December 29, 2015 2:03 PM
To: Executive Office All
Subject: Changes in Administration

Team,

As you are aware, we have been working closely with the independent task force that has been reviewing state, local and federal actions regarding the serious health issues related to water in Flint.

Although the task force's final report is not yet complete, members have made the Governor aware of some interim findings, and there are interim steps the Governor has decided to take immediately in order to restore trust in how we in state government keep residents safe and informed.

As part of this process, Dan Wyant, director of the Department of Environmental Quality, has offered his resignation, and Governor has reluctantly decided to accept it. There are likely to be other personnel changes in MDEQ as well.

I want to thank Dan for his service. He has been the DEQ director since the start of the administration, and previously headed the Agriculture Department under both Gov. Engler and Gov. Granholm. He is passionate about public service and protecting our state's environment.

The situation in Flint is serious and challenging. We will continue to work closely with the task force and city leaders as we move forward, committed to protecting the health of people living in Flint and around our state.

Sincerely,

Jarrod Agen

From: Rachel Hoekstra <RHoekstra@senate.michigan.gov>
Sent: Tuesday, December 29, 2015 3:25 PM
To: Ackerman, Darin (GOV)
Subject: Re: NEWS UPDATE--Wyant Resigns In Wake Of Flint Water Crisis

Whoa.

Sent from my iPhone

> On Dec 29, 2015, at 3:00 PM, Ackerman, Darin (GOV) <ackermand3@michigan.gov> wrote:
>
>
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> From: Gongwer News Service <gongwerreports@gongwer.com<mailto:gongwerreports@gongwer.com>>
> Date: December 29, 2015 at 2:54:21 PM EST
> To: <Michigan_State_Employees_updates@gongwer.com<mailto:Michigan_State_Employees_updates@gongwer.com>>
> Subject: NEWS UPDATE--Wyant Resigns In Wake Of Flint Water Crisis
> Reply-To: <gongwerreports@gongwer.com<mailto:gongwerreports@gongwer.com>>
>
>
> [Gongwer Logo]<http://www.gongwer.com/index.cfm>
>
> Tuesday, December 29, 2015, 02:53 PM
>
> Wyant Resigns In Wake Of Flint Water Crisis
>
> Department of Environmental Quality Director Dan Wyant has resigned in response to the water crisis that erupted three months ago in Flint.
>
> "MDEQ Director Dan Wyant has offered his resignation, and I've determined that it's appropriate to accept it. I'm also making other personnel changes at MDEQ to address problems cited by the task force," Governor Rick Snyder said in a statement.
>
> "But changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on this issue to be our partners in helping us improve Flint water," Mr. Snyder said. "Let's share research on water and blood lead level testing so we can arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we're using the very best testing protocols to ensure Flint residents have safe drinking water and that we're taking steps to protect their health over the short and long term."
>
> The DEQ has come under major criticism for how it handled testing for lead in Flint drinking water after the city switched to the Flint River as its water source. The water was not properly treated for corrosion, causing lead to leach from service lines into the drinking water.
>
> "I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure," Mr. Snyder said. "I know

many Flint citizens are angry and want more than an apology. That's why I'm taking the actions today to ensure a culture of openness and trust. We've already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we're going to meet soon to discuss other ways the state can offer assistance."
>
> Gongwer News Service will have more on this story in today's Michigan Report.
>
> _____
>
> Please send all correspondence to gongwer@gongwer.com<mailto:gongwer@gongwer.com> This mailbox is not regularly monitored.
>
> Copyright, 2015, Gongwer News Service, Inc. All Rights Reserved. This message and any attachments may not be forwarded or reproduced without express permission from Gongwer News Service.

From: Agen, Jarrod (GOV)
Sent: Tuesday, December 29, 2015 4:26 PM
To: Ackerman, Darin (GOV)
Cc: Posthumus, Dick (GOV)
Subject: Re: Changes in Administration

Thanks Darin.

Our own task force delivered a letter to the Governor today. The letter will be public tomorrow. I suggest we share the letter with Arlen.

There is also the Auditor General's report which already became public.

I appreciate their support of Dan, but we cannot just say this is dem politics.

Keith Creagh will likely take over as interim at DEQ. We are trying to make that announcement tomorrow.

I'm open to any further suggestions for informing the Legislators.

Sent from my iPhone

On Dec 29, 2015, at 3:55 PM, Ackerman, Darin (GOV) <ackermand3@michigan.gov> wrote:

> I'm passing this text among from Jim Stamas because I told him I would:
>
> "Wanted to pass along my STRONG DISAPPOINTMENT with the resignation on Director Wyant. This is pure Dem politic, not an acceptable way to move our state forward."
>
> I realize there's nothing we can do to alter the resignation now, nor do I know all the details behind it. However, since Jim's text likely represents the viewpoint of many Senate and House GOP caucus members, we may want to consider delivering an supplementary message to that audience - either through Arlan or some other direct & discreet means.
>
> I'm out today and in tomorrow, so I apologize if you've already done something in this regard and I'm unaware.
>
> Sent from my iPhone
> On Dec 29, 2015, at 2:02 PM, Agen, Jarrod (GOV) <AgenJ@michigan.gov> wrote:
>
> > Team,
> >
> > As you are aware, we have been working closely with the independent task force that has been reviewing state, local and federal actions regarding the serious health issues related to water in Flint.

Although the task force's final report is not yet complete, members have made the Governor aware of some interim findings, and there are interim steps the Governor has decided to take immediately in order to restore trust in how we in state government keep residents safe and informed.

As part of this process, Dan Wyant, director of the Department of Environmental Quality, has offered his resignation, and Governor has reluctantly decided to accept it. There are likely to be other personnel changes in MDEQ as well.

I want to thank Dan for his service. He has been the DEQ director since the start of the administration, and previously headed the Agriculture Department under both Gov. Engler and Gov. Granholm. He is passionate about public service and protecting our state's environment.

The situation in Flint is serious and challenging. We will continue to work closely with the task force and city leaders as we move forward, committed to protecting the health of people living in Flint and around our state.

Sincerely,

Jarrod Agen

From: Anne Blankenhorn <ABlankenhorn@senate.michigan.gov>
Sent: Tuesday, January 05, 2016 2:59 PM
To: Ackerman, Darin (GOV)
Subject: FW: Language for interagency coordinator

Hey, Darin:

Happy New Year!! Per my phone message, see below.

Let me know if you have any questions.

Anne

From: bridget [mailto:bridget@julianvail.com]
Sent: Tuesday, January 5, 2016 2:43 PM
To: Anne Blankenhorn <ABlankenhorn@senate.michigan.gov>
Subject: Fw: Language for interagency coordinator

Hi Annie:

You asked for information about inter-agency coordination. Here is the news release announcing the bovine TB program and Bob Bender's appointment back in 1999:

http://www.michigan.gov/emergingdiseases/0,4579,7-186-25804_26354_26647-80364--,00.html
The news release outlines the problem and then offers solutions...

I'd go beyond this and suggest an "Office of the Flint Drinking Water Ombudsman" and since MDHHS is culpable - they should be at the table, but the residents won't trust them. Perhaps an outside organization familiar with bringing together state agencies and other stakeholders should be designated, not an internal organization... An organization with experience and authority that can back and guide the appointed spokesperson.

This report outlines the funds assigned to the TB eradication effort:
http://www.senate.michigan.gov/sfa/Publications/Issues/Bovine/BovineTB.pdf

and here's an example of legilsative involvement - a way to justify the Senate's interest:
http://www.michigan.gov/documents/mdard/MDARDAIDLegislativeRptBTBProgramJan2016QtrlyUpdate010516_509849_7.pdf

feel free to contact JV, LLC for suggestions we have lots of history here on interagency/public/stakeholder coordination.

Cheers,

b

RSS Feed:	MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Posted on:	Tuesday, December 22, 2015 4:48 AM
Author:	MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Subject:	Doctor: Strongest link yet between water, kids' lead levels
Full article link:	http://www.msn.com/en-us/news/us/doctor-strongest-link-yet-between-water-kids-lead-levels/ar-BBnNRUj?li=BBnbcA1&srcref=rss&ocid=iehrs

A new study provides the strongest evidence yet of a link between elevated blood-lead levels in children living in Flint, Michigan, and the struggling city's water system, a pediatrician who first raised alarms about the matter said Monday.Dr.

View article...

RSS Feed:	Michigan.Gov | SOM | State of Michigan | Mi Newswire
Posted on:	Friday, October 02, 2015 1:00 PM
Author:	Michigan.Gov | SOM | State of Michigan | Mi Newswire
Subject:	Gov. Rick Snyder: Comprehensive action plan will help Flint residents address water concerns
Full article link:	http://www.michigan.gov/som/0,4669,7-192--366287--rss,00.html

Collaborative effort with state, federal and city leaders focuses on testing, assistance

View article...

RSS Feed:	Michigan.Gov | SOM | State of Michigan | Mi Newswire
Posted on:	Thursday, October 08, 2015 10:00 AM
Author:	Michigan.Gov | SOM | State of Michigan | Mi Newswire
Subject:	Gov. Rick Snyder: Move back to Detroit water provides best protection for public health in Flint
Full article link:	http://www.michigan.gov/som/0,4669,7-192--366801--rss,00.html

View article...

Posted on: Monday, October 19, 2015 1:00 AM
Author: Michigan.Gov | SOM | State of Michigan | Mi Newswire
Subject: DEQ Director Dan Wyant issues statement about Flint drinking water

View article...

RSS Feed:	Michigan.Gov | SOM | State of Michigan | Mi Newswire
Posted on:	Thursday, December 03, 2015 1:00 AM
Author:	Michigan.Gov | SOM | State of Michigan | Mi Newswire
Subject:	MDHHS releases latest data outlining blood lead levels in Flint; Follow-up care, case management resources continue for families
Full article link:	http://www.michigan.gov/som/0,4669,7-192--370518--rss,00.html

View article...

RSS Feed:	Michigan.Gov | SOM | State of Michigan | Mi Newswire
Posted on:	Thursday, December 03, 2015 1:00 AM
Author:	Michigan.Gov | SOM | State of Michigan | Mi Newswire
Subject:	MDHHS releases latest data outlining blood lead levels in Flint; Follow-up care, case management resources continue for families
Full article link:	http://www.michigan.gov/som/0,4669,7-192--370517--rss,00.html

View article...

From: Ackerman, Darin (GOV)
Sent: Thursday, September 24, 2015 2:06 PM
To: Pallone, Maggie (DEQ)
Subject: FW: Data
Attachments: Pediatric Lead Exposure Flint Water 092415 FINAL.pdf

You may already have this, but just in case..

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

From: Murray, David (GOV)
Sent: Thursday, September 24, 2015 2:02 PM
To: Ackerman, Darin (GOV) <ackermand3@michigan.gov>
Subject: FW: Data

Thanks, Darin!

From: [redacted] **On Behalf Of** Angela Wittrock
Sent: Thursday, September 24, 2015 1:44 PM
To: Murray, David (GOV) <MurrayD1@michigan.gov>
Subject: Fwd: Data

---------- Forwarded message ----------
From: **Andy Leavitt** <aleavitt@senatedems.org>
Date: Thu, Sep 24, 2015 at 1:41 PM
Subject: Data
To: Angela Wittrock <awittrock@senatedems.org>

Hey Angela,

Sorry for the delay. Dr. Mona Hanna-Attisha wanted to make a few changes to one of her slides.

Andy

PEDIATRIC LEAD EXPOSURE IN FLINT, MI: CONCERNS FROM THE MEDICAL COMMUNITY

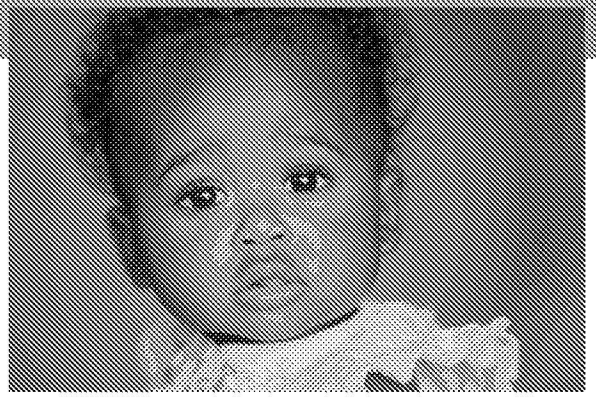
(this will not be written. I will introduce myself, Dr Reynolds can introduce himself and then I will say that we are here as a medical communtiy representing: GFHC, GCMS, Hurley Med Center, Hamilton Health Network)

THANK YOU'S

(this will not be written.

Thank you to Hurley for hosting this press conference, TY to grassroots organizers, prof Edwards and virginia tech, state and federal agencies involved in keeping our water safe, the city for being concerned and taking action, and health department for ensuring the safety of the entire population??

Introducing Makayla*



- 12 month old girl (DOB 8/15/2014) presented last week for her 1 year old check up. No concerns.
- Lives with single mom and 2 older siblings in west side (48504). Formula from WIC; powder mixed with warm tap water.
- Physical exam and development are normal. Makayla receives her 1 year old vaccines and routine lead and hemoglobin screening.
- *A couple days later, lead level comes back as 6 ug/dL.*

*Hypothetical scenario

Blood lead level of 6 ug/dL….

- Blood lead levels (BLL) above 5 ug/dL are considered elevated blood lead levels (EBL)
- Just a few years ago (2012), 10 ug/dL was cutoff
- Increasing evidence shows NO safe blood lead level
- Disproportionately impacts low income children
- Primary prevention is most important
  - Prevents exposure before it occurs!

Primary Prevention

- "Because no measurable level of blood lead is known to be without deleterious effects, and because once engendered, the effects appear to be irreversible in the absence of any other interventions, public health, environmental and housing policies should encourage PREVENTION of all exposure to lead."

"Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention." 2012 CDC Advisory Committee on Childhood Lead Poisoning Prevention.

What will happen to Makayla?

- Vast evidence supports increased likelihood of:
  - Decrease in IQ
    - An increase in BLL from 1 to 4 ug/dL, drops mean IQ -3.7 points
  - Small change in mean IQ, shifts entire population IQ distribution
    - Reduces high achievers IQs (>130) and increases kids with low IQs (<70)
    - Implications for early intervention, special education services, employment, incarceration, life achievement, etc

Lanphear BP et al., Low-level environmental lead exposure and children's intellectual function: an international pooled analysis. Environ Health Perspect, 2005. 113:894-9.
Fewtrell LJ, Pruss-Ustun A, Landrigan P, and Ayuso-Mateos JL, Estimating the global burden of disease of mild mental retardation and cardiovascular diseases from environmental lead exposure. Environmental Research, 2004. 94:120-33.

Behavioral Burden

- Increased likelihood of :
  - ADHD behaviors
  - Delinquent behaviors and arrests
  - Total arrests and increased rates of arrests involving violent offenses
  - Other health effects: hematologic, cardiovascular, immunologic, endocrine, etc

Wright, JP, KN Dietrich, MD Ris, et al. 2008. Association of prenatal and childhood blood lead concentrations with criminal arrests in early adulthood. *PLoS Med* 5(5): e101

Chen, A, B Cai, KN Dietrich, et al. 2007. Lead exposure, IQ, and behavior in urban 5-7 year-olds: Does lead affect behavior only by lowering IQ? *Pediatrics* 119(3): e650-e658.

Needleman, HL, C McFarland, RB Ness, et al. 2002. Bone lead levels in adjudicated delinquents: A case control study. *Neurotoxicology and Teratology* 24(6):711-717.

The Cost

- "For childhood lead poisoning, $5.9 million in medical care costs, as well as an additional **$50.9 billion** (sensitivity analysis: $44.8–$60.6 billion) per year in lost economic productivity resulting from reduced cognitive potential from preventable childhood lead exposure."

- "The present value of Michigan's economic losses attributable to lead exposure in the 2009 cohort of 5 year-olds ranges from $3.19 (using U.S. blood lead levels) to **$4.85 billion** (using Michigan blood lead levels) per year in loss of future lifetime earnings."

Leonardo Trasande and Yinghua Liu. Reducing The Staggering Costs Of Environmental Disease In Children, Estimated At $76.6 Billion In 2008. *Health Affairs*, 30, no.5 (2011):863-870

The Price of Pollution: Cost Estimates of Environment-Related Childhood Diseases in Michigan. 2010 Report by Michigan Network of Children's Environmental Health

Lead in Water

- Increasing as source of lead because of success in controlling other sources.
- Increasing due to aging water infrastructures, change in water sources, disinfectant uses, etc
- Lots of variability in water lead levels depending on internal and external pipes, use of water, temperature, etc

- Disproportionally impacts developmentally-vulnerable formula-fed infants and pregnant mothers
  - Formula preparation

Triantafyllidou, S., Gallagher. D. and Edwards, M. Assessing risk with increasingly stringent public health goals: the case of water lead and blood lead in children. Journal of Water and Health. doi: 10.2166/wh.2013.067 58-68 (2014).
Edwards, M. Fetal Death and Reduced Birth Rates Associated with Exposure to Lead-Contaminated Drinking Water. Env. Sci. and Tech. 2013 DOI: 10.1021/es4034952

Role of the Pediatrician

- Prevention of everything to optimize children's health
- Lead screening as recommended by CDC and AAP at 1 and 2 years of age
- Inquiry and advocacy

RESEARCH FINDINGS

Results of Pediatric Blood Lead Levels

- **Methods**
  - Data from all blood lead levels processed at Hurley Medical Center
  - HMC Institutional Review Board (IRB) approved
  - All children under 5 years of age
  - Zip codes 48501-48507
  - Two periods of comparison:
    - PRE-SWITCH: January 1, 2013 – September 15, 2013
      - WATER SWITCH APRIL 2014
    - POST-SWITCH: January 1, 2015 – September 15, 2015

Results of Pediatric Blood Lead Levels

- **Methods**
  - Analyzed % Elevated Blood Lead (EBL)
    - EBL = Blood lead Levels > 5 g/dL
  - EBL analysis conducted based on scientific literature (most notably DC lead in water exposure)

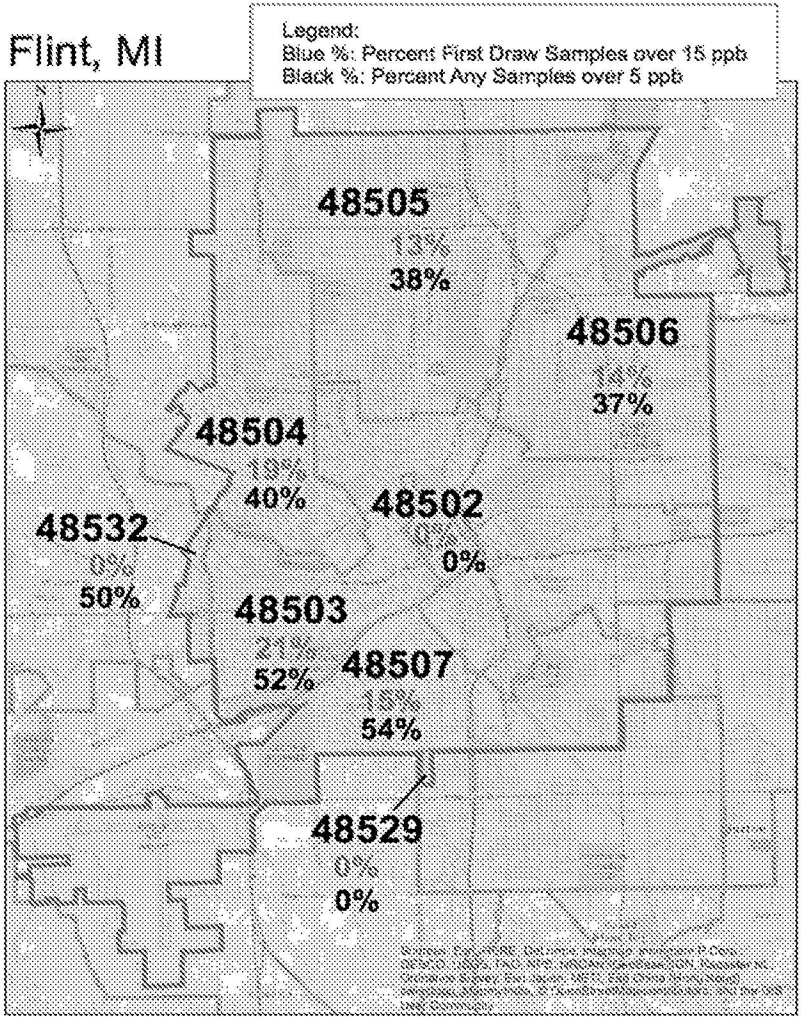
Blood Lead Level Analysis

- Large sample size
  - N= 1746 for Flint children (pre n=906, post n=840)
  - N= 1670 for non-Flint children (pre n=943, post n=727)

Flint results for children 5 years and under:

- PRE-SWITCH % EBL: **2.1%** **(consistent with MDHHS data 2.2)**
- POST-SWITCH % EBL: **4.0%**
- **$p < 0.05$; STATISTICALLY SIGNIFICANT CHANGE**

Zip Codes With High Water Lead



- Focus on zip codes (48503 and 48504) with high water lead levels
- Total n=742, pre n=394, post n=348

Results:

- PRE-SWITCH % EBL: **2.5%**
- POST-SWITCH % EBL: **6.3%**
- **$p < 0.05$; STATISTICALLY SIGNIFICANT CHANGE**

What was rest of county doing?

- Analysis of same time periods for Genesee County children who live outside of City of Flint zips codes (non 48501-48507)
  - N=1670 for non-Flint children (pre n=943, post n=727)

Non-Flint results for children 5 years and under:

- PRE-SWITCH % EBL: **0.6%**
- POST-SWITCH % EBL: **1.0%**
- **p = 0.637; NO STATISTICAL CHANGE**

Blood Lead Level Analysis

- % EBL all children less than 5 years of age

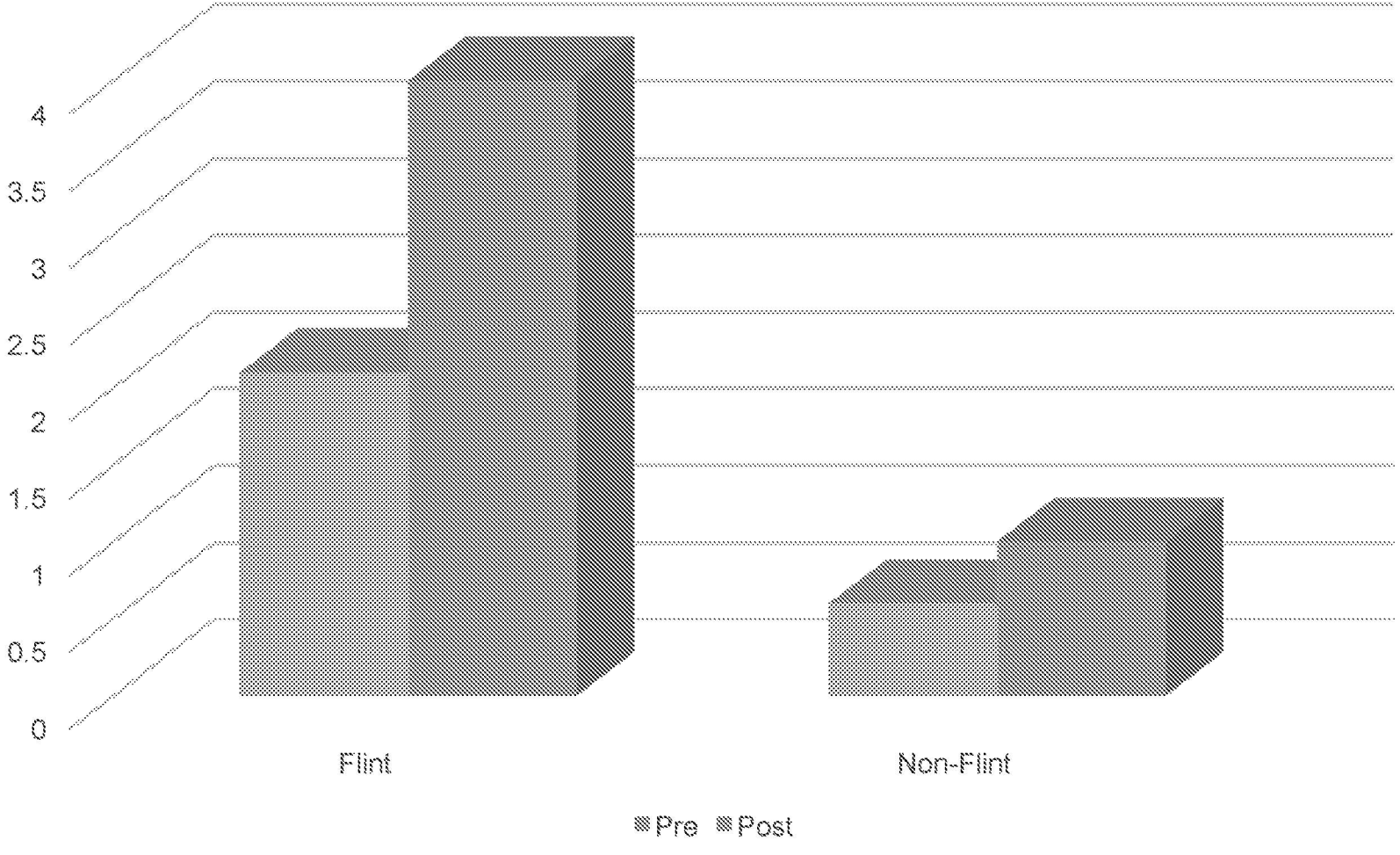
	ALL FLINT (n=1746)	HIGH-water lead FLINT (n=742)	REST OF FLINT (n=1004)	NON-FLINT (n=1670)
PRE-SWITCH	2.1%	2.5%	1.8%	0.6%
POST-SWITCH	4.0%	6.3%	2.4%	1.0%

Blood Lead Level Analysis – 15 month

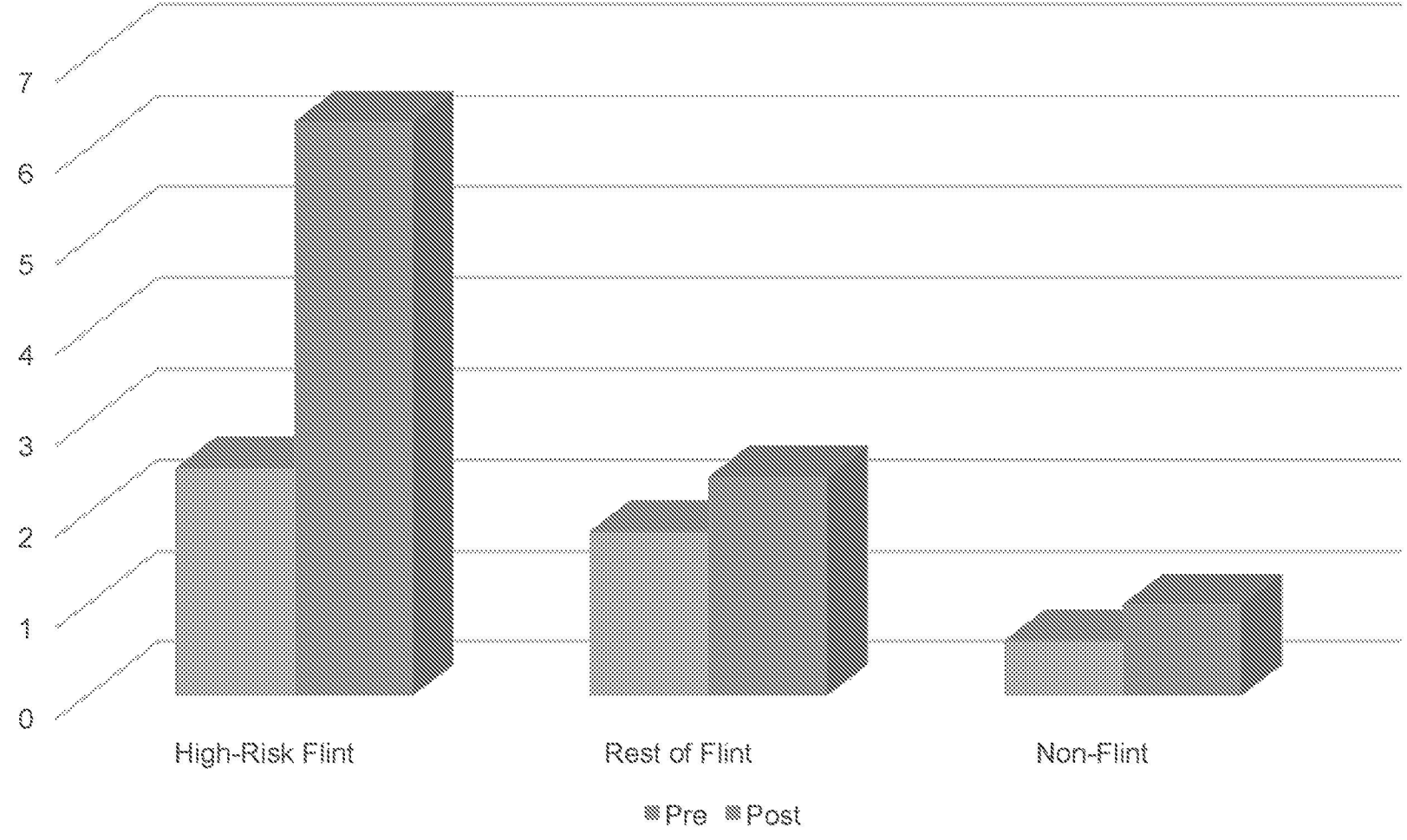
- % EBL children 15 months or less
  - Total Flint n=619, pre n=295, post n=324 (smaller sample size)
  - Total Non-Flint n=816, pre n=443, post n=376

	ALL FLINT (n=619)	HIGH-water lead (n=269)	REST OF FLINT (n=350)	NON-FLINT (n=816)
PRE-SWITCH	1.0%	1.5%	0.6%	0.5%
POST-SWITCH	2.5%	4.4%	1.1%	0.5%

Graphical Summary
Change in % EBL Flint vs Non-Flint



Graphical Summary
Change in % EBL by area



Conclusions from BLL analysis

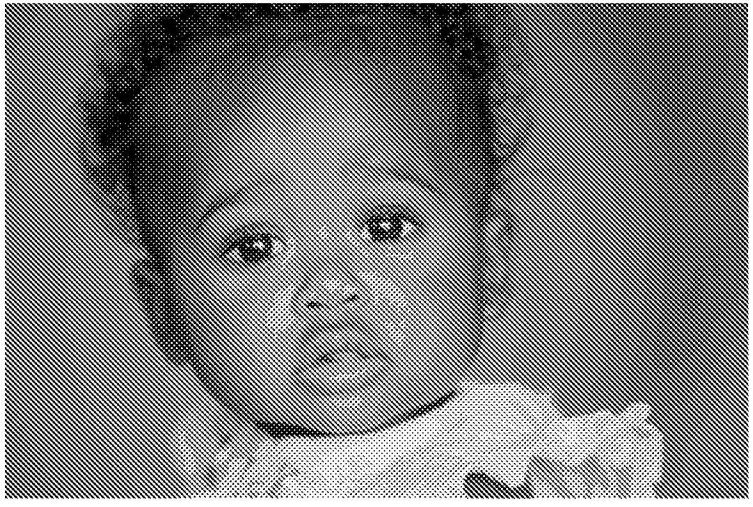
- Based on our research, % of children with EBL in Flint has increased
  - Most striking increase in zip codes with highest water lead levels
  - Also saw an increase in kids less than 15 months, sample small
- Results underestimate risk:
  - Infants not screened for lead
  - BLL may have peaked before being measured
  - Water usage has dropped

Recommendations

- AAP and CDC recommendation of primary prevention
- Limit further exposure
  - Encourage breast feeding
  - No tap water for high risk groups: infants on formula & pregnant mothers
  - Distribution of lead clearing NSF-approved filters
  - Public education regarding precautions (flushing, cold water, etc)
  - Connect to Lake Huron water source
- Support city's health advisory and health department's public education efforts

And Makayla…

- Asymptomatic now
- But what will her future hold and an entire generation of Flint children if we don't err on the side of safety?



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Subject: Fwd: Mtg on Flint Water w/ Sen Ananich (staff)/DM/DP

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Sent from my iPhone

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I'll call him right now, thanks.

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I think he was going deer, grouse and duck hunting in a 24 hour span.

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

From: Posthumus, Dick (GOV)
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I should be there too

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> Sent from my iPhone
>
> On Oct 2, 2015, at 11:11 AM, Posthumus, Dick (GOV) <Posthumusd@michigan.gov> wrote:

You might just touch base with Andy and make sure he is aware
Dick

From: Ackerman, Darin (GOV)
Sent: Friday, October 02, 2015 10:40 AM
To: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>
Subject: Fwd: Mtg on Flint Water w/ Sen Ananich (staff)/DM/DP

I assume from Sarah Wurfel's email that Jim is in the loop on everything we're announcing today, correct?

Sent from my iPhone

Begin forwarded message:

> **From:** "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
> **Date:** October 2, 2015 at 10:16:54 AM EDT
> **To:** "Posthumus, Dick (GOV)" <Posthumusd@michigan.gov>
> **Cc:** "Ackerman, Darin (GOV)" <ackermand3@michigan.gov>, "Lange, Michelle (GOV)" <LangeM3@michigan.gov>
> **Subject: Re: Mtg on Flint Water w/ Sen Ananich (staff)/DM/DP**
>
> Stay glued to Jim, he's been pretty helpful not withstanding that the issue is explosive and he doesn't want to be a casualty. I think Andy is driving most of it. The young guy is wise beyond his years, and he's politically savvy and is always going to be pitching for Kildee. It seems obvious to me that the feds, the county, the locals and the politicals are looking to throw someone under the bus without being dragged along behind them...
>
> > On Oct 1, 2015, at 8:48 PM, Posthumus, Dick (GOV) <Posthumusd@michigan.gov> wrote:
> >
> > What can I do to help
> >
> > Sent from my iPhone
> >
> > > On Oct 1, 2015, at 5:07 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:
> > >
> > > Met with Jim and Andy last night, Flint ministers this morning, Rep.

Neely at 11:00, our entire group at 1:30, Dayne Walling at 4:00 and Saxton at 4:30 all on Flint...help...get me out of this mess....

-----Original Message-----

From: Posthumus, Dick (GOV)

Sent: Wednesday, September 30, 2015 1:56 PM

To: Muchmore, Dennis (GOV) <muchmored@michigan.gov>

Subject: RE: Mtg on Flint Water w/ Sen Ananich (staff)/DM/DP

They want to bring a proposal for the appropriations process I believe. I think we just need to listen for now and so I didn't want to waste anyone else's time. The "old people's " time isn't as valuable!

-----Original Message-----

From: Muchmore, Dennis (GOV)

Sent: Wednesday, September 30, 2015 1:54 PM

To: Posthumus, Dick (GOV) <Posthumusd@michigan.gov>

Cc: Wisniewski, Wendy (GOV) <wisniewskiw@michigan.gov>

Subject: Re: Mtg on Flint Water w/ Sen Ananich (staff)/DM/DP

So, what do they want? Who should we bring?

> On Sep 30, 2015, at 10:58 AM, Posthumus, Dick (GOV) <Posthumusd@michigan.gov> wrote:
>
> Attending:

Sen Ananich (he may arrive late or leave early - they are working on

his schedule) Andy Leavitt Dan Oberlan - Policy Dave Etenger - Policy

CON: Shawn - 3-2820

<meeting.ics>

From: Ackerman, Darin (GOV)
Sent: Thursday, October 08, 2015 11:11 AM
To: Starr, Scott (DTMB)
Subject: FW: NEWS UPDATE--Snyder Asks Legislature For $6M To Reconnect Flint To Detroit Water

Have we already identified a funding source or do we have options? SML is asking. They mentioned the Michigan Health Endowment Fund, though I don't know that the current statutory language would allow for such.

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

From: gongwerreports@gongwer.com [mailto:gongwerreports@gongwer.com]
Sent: Thursday, October 08, 2015 10:22 AM
To: Michigan_State_Employees_updates@gongwer.com
Subject: NEWS UPDATE--Snyder Asks Legislature For $6M To Reconnect Flint To Detroit Water

Thursday, October 8, 2015, 10:21 AM

Snyder Asks Legislature For $6M To Reconnect Flint To Detroit Water

FLINT – Governor Rick Snyder said today that Flint will reconnect to the Detroit water system and no longer draw water for its residents and businesses from the Flint River, a move that comes in response to insufficient corrosion treatment for the river water causing unsafe levels of lead to leach into the water.

The announcement follows one of the most serious environmental crises to confront the state and a major outcry that Mr. Snyder's administration, and the man he appointed to run the city when it was in a financial emergency, failed to assure the river water – more corrosive than the water from Lake Huron, where the Detroit system draws its water – was properly treated before making the switch to the river. Testing has shown rising levels of lead in the blood of some children in the city and pockets of the city with lead levels in the water that exceed recognized limits for safety.

Mr. Snyder said it will cost $12 million to shift Flint to Detroit water through next summer, when a new pipeline to Lake Huron is expected to be completed to supply Flint and surrounding areas with its water. He said he is asking the Legislature to supply $6 million. The Mott Foundation will contribute $4 million and the city of Flint will chip in $2 million.

Gongwer News Service will have more on this story in today's Michigan Report.

Please send all correspondence to gongwer@gongwer.com This mailbox is not regularly monitored.

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From: Ackerman, Darin (GOV)
Sent: Thursday, October 08, 2015 2:20 PM
To: Bob DeVries; Pete Langley
Subject: Flint Water Funding Solution
Attachments: City of Flint Water Funding Solution (3).pdf

Attached is what our team is proposing with respect to the Flint water funding issue. I've not shared with anyone else yet as I would like to get your feedback first.

Let me know what you think.

Thanks,

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

City of Flint Water - Funding Solution
State of Michigan Commitment

Items in green to not require supplemental appropriations

Agency	GF/GP	Gross	Comments
Filters:			
Health & Human Services	$1,016,000	$1,016,000	AY15 work project
Health & Human Services	$0	$1,000,000	DEQ State Restricted Settlement Funds provided to HHS Emergency Services local office (FY16 appropriation).
Subtotal Filters:	**$1,016,000**	**$2,016,000**	
Reconnect to DSW:			**Reconnection costs ~$1.3m/month x 9 mos. to be shared by state & Flint**
Environmental Quality	$5,000,000	$6,000,000	DEQ State Restricted Settlement Fund of $1m; balance GF/GP
Subtotal Reconnect:	**$5,000,000**	**$6,000,000**	
Testing Costs:			
Environmental Quality	$1,000,000	$1,000,000	Additional tests at state lab; cost per sample: $26
Subtotal Testing:	**$1,000,000**	**$1,000,000**	
Additional Agency Support:			
LARA	$0	$200,000	Support for inspectors to do schools (public and parochial) and health facilities (hospitals, Long Term Care, etc.).
MSHDA	$0	$249,900	Sufficient spending authority already exists
Health & Human Services	$850,000	$850,000	Follow-up on children with elevated blood levels
Environmental Quality	$300,000	$300,000	Home and school inspections.
Subtotal Additional Support:	**$1,150,000**	**$1,599,900**	
Total Commitment	**$8,166,000**	**$10,615,900**	
Total Supplemental Appropriations	**$7,150,000**	**$9,350,000**	

From: Ackerman, Darin (GOV)
Sent: Friday, October 09, 2015 8:55 AM
To: Andy Leavitt; Shaquila Myers
Subject: Flint Water Funding Source
Attachments: City of Flint Water Funding Solution (3).pdf

Good morning,

You may already have this, but just in case...

Let me know if you need anything else.

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

City of Flint Water - Funding Solution
State of Michigan Commitment

Items in green to not require supplemental appropriations

Agency	GF/GP	Gross	Comments
Filters:			
Health & Human Services	$1,016,000	$1,016,000	AY15 work project
Health & Human Services	$0	$1,000,000	DEQ State Restricted Settlement Funds provided to HHS Emergency Services local office (FY16 appropriation).
Subtotal Filters:	**$1,016,000**	**$2,016,000**	
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Total Supplemental Appropriations	**$7,150,000**	**$9,350,000**	

From: Ackerman, Darin (GOV)
Sent: Friday, October 16, 2015 4:26 PM
To: Shaquila Myers
Subject: RE: Bill Signing for HB 4102

Hi Shaquila,

I'm not aware that we have any plans to do so, but I don't see why we couldn't accommodate such a request from the Senator. Would he like us to schedule a ceremonial bill signing?

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

From: Shaquila Myers [mailto:SMyers@senate.michigan.gov]
Sent: Friday, October 16, 2015 3:47 PM
To: Ackerman, Darin (GOV) <ackermand3@michigan.gov>
Subject: Bill Signing for HB 4102

Hi Darin,

Do you know if there are any plans for a bill signing ceremony for HB 4102(supplemental/Flint water)? I think Sen. Ananich is interested in attending if the opportunity is available.

Shaquila Myers, MPA
Legislative Director
Senate Minority Leader Jim Ananich
...
Capitol Building, Room S-105 | Lansing, MI 48909-7536
P: 517.373.1445

Please sign up for our e-news at: Senatedems.com/Ananich
Facebook: jimananich | Twitter: @jimananich

From: Ackerman, Darin (GOV)
Sent: Wednesday, October 21, 2015 1:21 PM
To: Murray, David (GOV)
Subject: RE: Flint Task Force release notification
Attachments: image001.jpg

Do they already know about this?

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

From: Murray, David (GOV)
Sent: Wednesday, October 21, 2015 1:14 PM
To: Ackerman, Darin (GOV) <ackermand3@michigan.gov>; Lange, Michelle (GOV) <LangeM3@michigan.gov>; Posthumus, Dick (GOV) <Posthumusd@michigan.gov>
Subject: Flint Task Force release notification

Hello Legislative Team,

Sara asked that I send this to you for legislative notifications, particularly Sen. Ananich and Reps. Neeley and Phelps. Our goal is to release between 2:15 and 3 p.m., and ask that you wait until at least 2 before notifying.

Thank you!

Dave

Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Experts in public health, water management, environmental protection to focus on steps to protect residents

LANSING, Mich. – Gov. Rick Snyder today announced the creation of an independent advisory task force charged with reviewing actions regarding water use and testing in Flint and offer recommendations for future guidelines to protect the health and safety of all state residents.

Task force members include experts in public health and medicine, water management, and environmental protection from both sides of the aisle, and will be co-chaired by Ken Sikkema of Public Sector Consultants and Chris Kolb, of the Michigan Environmental Council. Also serving will be Dr. Matthew Davis of the University of Michigan Health System, Eric Rothstein, of the Galardi Rothstein Group and Dr. Lawrence Reynolds of Mott Children's Health Center in Flint.

"Transitioning back to the Detroit Water and Sewerage Department-Great Lakes Water Authority is a good first step to protecting public health in Flint, but it's not the last step," Snyder said. "Bringing in outside experts to evaluate our actions and help monitor and advise on potential changes to law, procedures and practices will be key to continuing work on the comprehensive action plan and ensuring safe drinking water for all the residents in Flint and all of Michigan."

Snyder said the administration will fully cooperate with task force members, saying he wants an unbiased report focusing on steps taken in the past and recommendations that could improve practices to ensure all residents have access to safe, clean water.

Ken Sikkema is a senior policy fellow at Public Sector Consultants, where he specializes in public finance, environment, and energy policy. Prior to joining the firm, Sikkema served in both the Michigan House and Senate, culminating with four years as Senate majority leader. He has also served as both an adjunct and visiting professor at Grand Valley State University.

Chris Kolb is president of the Michigan Environmental Council, a statewide coalition of 70 environmental, public health and faith-based nonprofit groups. Before joining the MEC, Kolb represented Ann Arbor in the state House for six years and served six years on the Ann Arbor City Council. He has been president of the MEC for six years.

Matthew Davis, M.D., M.A.P.P., is professor of pediatrics and internal medicine at the University of Michigan Health System and professor of public policy at the Gerald R. Ford School at the University of Michigan, having joined the faculty in 2000. Davis also is a professor of health management and policy at the School of Public Health. He previously served as the chief medical executive of the Michigan Department of Community Health/Department of Health and Human Services.

Eric Rothstein is a national water issues consultant and principal at the Galardi Rothstein Group. He served as an independent advisor on the creation of the Great Lakes Water Authority. Rothstein also has served as Jefferson County, Alabama's rate consultant and municipal adviser for litigation related to the county's bankruptcy and issuance of $1.7 billion in sewer warrants and led strategic financial planning for the City of Atlanta's Department of Watershed Management. He has more than 30 years of experience in water, wastewater and stormwater utility finance and rate-making assessments.

Lawrence Reynolds, M.D., is a pediatrician in Flint who serves as president of the Mott Children's Health Center. He received his medical degree from Howard University College of Medicine and has been in practice for 36 years. He has served as president of the Genesee County Medical Society and the Michigan Chapter of the American Academy of Pediatrics. He has been honored for his humanitarian and advocacy efforts on behalf of children from the Community Foundation of Greater Flint.

Snyder has said reconnecting with the authority is a critical step to resolving water quality issues and addressing related health concerns. It will not immediately resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control.

To best protect public health, state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure. The Michigan Departments of Environmental Quality and Health and Human Services are continuing to provide free water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

####

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov

517-335-6397, office
[redacted]
Twitter:@michigandmurray

From: Ackerman, Darin (GOV)
Sent: Wednesday, October 21, 2015 2:16 PM
To: Andy Leavitt
Subject: FW: NEWS RELEASE: Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

You already know this, but I always like to double down must to make sure...

Contacts: Sara Wurfel or Dave Murray
517-335-6397

FOR IMMEDIATE RELEASE
Wednesday, Oct. 21, 2015

Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Experts in public health, water management, environmental protection to focus on steps to protect residents

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Snyder said the administration will fully cooperate with task force members, saying he wants an

unbiased report focusing on steps taken in the past and recommendations that could improve practices to ensure all residents have access to safe, clean water.

Ken Sikkema is a senior policy fellow at Public Sector Consultants, where he specializes in public finance, environment, and energy policy. Prior to joining the firm, Sikkema served in both the Michigan House and Senate, culminating with four years as Senate majority leader. He has also served as both an adjunct and visiting professor at Grand Valley State University.

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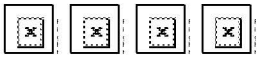
####

STAY CONNECTED:



This email was sent to ackermand3@michigan.gov on behalf of: The Executive Office of the Governor · 111 South Capitol Avenue · Lansing, MI 48909 · 517-335-7858

From: Ackerman, Darin (GOV)
Sent: Monday, November 16, 2015 12:02 PM
To: Posthumus, Dick (GOV)
Subject: 11-16-15 Senior Staff Overview

Hi Dick,

Hopefully you bagged one this morning!

Here's some bullets from today's Senior Staff meeting:

[redacted]t

Emmitt (Schedule) – the Governor is coming into the office today. He has a ground-breaking in Northville tomorrow, after which he leaves for RGA in Las Vegas until Thursday. On Friday there is an announcement in Detroit (they didn't say what), and he will be making calls on judgeship appointments.

[redacted]

Roberts (Budget) - Capital Outlay will be moving in legislature, and he doesn't anticipate any major problems. He continues to try and figure out how to best deal with the Hep C issue that presents an additional $100 million cost we had not accounted for. He said his budget team will know more about book closing details by the end of the week and once they do, will have a better line on where the cuts will need to come from.

Ackerman (Leg) – I reminded everyone that we have 9 session days left, at best. I reiterated that the sooner we can decide next steps on DPS the better, so we can hit a goal of trying to move it out of the Senate before Christmas break. I said a realistic timeline goal to get it to the Governor's desk is probably the first week in February, given the House and Senate are only in two full weeks in January. Our window to finish is should be after break and no later than before the budget presentation (was Feb. 11 last year).

[redacted]

[redacted]

[redacted]

Hollins (OUI) – Flint - we are working with the new Mayor (Weaver) to implement a public relations strategy to help pass long information to citizens. Kildee sent another letter to the Governor asking him to do more to address the issue, and it is unlikely this pattern will stop. There was a suit filed on Friday afternoon (I didn't catch by whom) saying the state violated due process rights when Flint switched from Detroit's water system. There are efforts underway to set up a meeting between the Governor and Mayor Weaver for relationship-building purposes.

Other/Round Robin:

- Scheduling is starting to work on 2016 - big picture/framework stuff.

- Nat is working on Delta – I told him I am pushing them to take up and run it out of the full senate the week we get back.

- Travis suggested that we save emails on Flint Water because we are going to get sued. He also mentioned that the petition to recall the Governor was rejected and that another one was being filed over the Flint water issue.

- Wurfel mentioned a horrific EAA incident of some kind...I didn't quite catch the details, but it appeared to be different from the FBI investigation stuff. I believe it may have been a suicide by one of the teachers. At any rate, she said she would keep us informed.

Let me know if you need more details on any of the items.

Thanks,

Darin Ackerman, Deputy Director
Legislative Affairs Division
Office of Governor Snyder
State Capitol
Lansing, MI 48913
Phone: (517) 241-3950

From: Ackerman, Darin (GOV)
Sent: Tuesday, December 29, 2015 3:00 PM
To: rhoekstra@senate.michigan.gov
Subject: Fwd: NEWS UPDATE--Wyant Resigns In Wake Of Flint Water Crisis

Sent from my iPhone

Begin forwarded message:

> **From:** Gongwer News Service <gongwerreports@gongwer.com>
> **Date:** December 29, 2015 at 2:54:21 PM EST
> **To:** <Michigan_State_Employees_updates@gongwer.com>
> **Subject: NEWS UPDATE--Wyant Resigns In Wake Of Flint Water Crisis**
> **Reply-To:** <gongwerreports@gongwer.com>
>
>
>
> Tuesday, December 29, 2015, 02:53 PM
>
> ## Wyant Resigns In Wake Of Flint Water Crisis
>
> Department of Environmental Quality Director Dan Wyant has resigned in response to the water crisis that erupted three months ago in Flint.
>
> "MDEQ Director Dan Wyant has offered his resignation, and I've determined that it's appropriate to accept it. I'm also making other personnel changes at MDEQ to address problems cited by the task force," Governor Rick Snyder said in a statement.
>
> "But changes in leadership and staff are not enough. I understand there can be disagreements within the scientific community. That is why I have directed both the departments of Environmental Quality and Health and Human Services to invite every external scientist who has worked on this issue to be our partners in helping us improve Flint water," Mr. Snyder said. "Let's share research on water and blood lead level testing so we can arrive at accurate and mutually supported conclusions. Together, we should work to affirm that we're using the very best testing protocols to ensure Flint residents have safe drinking water and that we're taking steps to protect their health over the short and long term."
>
> The DEQ has come under major criticism for how it handled testing for lead in Flint drinking water after the city switched to the Flint River as its water source. The water was not properly treated for corrosion, causing lead to leach from service lines into the drinking water.
>
> "I want the Flint community to know how very sorry I am that this has happened. And I want all Michigan citizens to know that we will learn from this experience, because Flint is not the only city that has an aging infrastructure," Mr. Snyder said. "I know many Flint citizens are angry and

want more than an apology. That's why I'm taking the actions today to ensure a culture of openness and trust. We've already allocated $10 million to test the water, distribute water filters, and help in other ways. Last week, I called Flint Mayor Karen Weaver, and we're going to meet soon to discuss other ways the state can offer assistance."

Gongwer News Service will have more on this story in today's Michigan Report.

Please send all correspondence to gongwer@gongwer.com This mailbox is not regularly monitored.

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From: Ackerman, Darin (GOV)
Sent: Tuesday, December 29, 2015 3:56 PM
To: Agen, Jarrod (GOV); Posthumus, Dick (GOV)
Subject: Re: Changes in Administration

I'm passing this text among from Jim Stamas because I told him I would:

"Wanted to pass along my STRONG DISAPPOINTMENT with the resignation on Director Wyant. This is pure Dem politic, not an acceptable way to move our state forward."

I realize there's nothing we can do to alter the resignation now, nor do I know all the details behind it. However, since Jim's text likely represents the viewpoint of many Senate and House GOP caucus members, we may want to consider delivering an supplementary message to that audience - either through Arlan or some other direct & discreet means.

I'm out today and in tomorrow, so I apologize if you've already done something in this regard and I'm unaware.

Sent from my iPhone
On Dec 29, 2015, at 2:02 PM, Agen, Jarrod (GOV) <AgenJ@michigan.gov> wrote:

> Team,
>
> As you are aware, we have been working closely with the independent task force that has been reviewing state, local and federal actions regarding the serious health issues related to water in Flint.
>
> Although the task force's final report is not yet complete, members have made the Governor aware of some interim findings, and there are interim steps the Governor has decided to take immediately in order to restore trust in how we in state government keep residents safe and informed.
>
> As part of this process, Dan Wyant, director of the Department of Environmental Quality, has offered his resignation, and Governor has reluctantly decided to accept it. There are likely to be other personnel changes in MDEQ as well.
>
> I want to thank Dan for his service. He has been the DEQ director since the start of the administration, and previously headed the Agriculture Department under both Gov. Engler and Gov. Granholm. He is passionate about public service and protecting our state's environment.
>
> The situation in Flint is serious and challenging. We will continue to work closely with the task force and city leaders as we move forward, committed to protecting the health of people living in Flint and around our state.
>
> Sincerely,
>
> Jarrod Agen

From: Baird, Richard (GOV)
Sent: Friday, October 18, 2013 1:59 PM
To: Ken Buckfire (ken.buckfire@millerbuckfire.com)
Subject: FW: Press Release: EM Statement on Water
Attachments: Earley Statement on Water.pdf; WaterPres053112.PDF; Cost Comparison. KWA v DWSD.pdf

---

From: Jason Lorenz [jlorenz@cityofflint.com]
Sent: Friday, October 18, 2013 10:38 AM
Subject: Press Release: EM Statement on Water

The attached release contains an official statement from Emergency Manager Darnell Earley regarding water issues.

Also attached are the water presentation from May, 2012 and the cost comparison report of KWA & DWSD from October, 2012 that were referenced in today's EM press briefing.

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039
jlorenz@cityofflint.com<mailto:jlorenz@cityofflint.com>

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
DARNELL EARLEY

Jason Lorenz
Public Information Officer
(810) 237-2039
jlorenz@cityofflint.com

For Immediate Release

Emergency Manager Darnell Earley Committed to Increased Transparency and Detailed Information on Water Rates

Flint, Michigan – October 18, 2013 –Flint Emergency Manager Darnell Earley has today announced that the City of Flint's water issues will be one of his key concerns in his new role and a top priority for his team. With the major decision to join the Karegnondi Water Authority made and the beginning of construction on the water intake and pipeline approaching, Mr. Earley expressed his commitment to thoroughly reviewing and assessing the scope of the issues in the following statement:

"Good management can only be accomplished with a careful examination of the facts; I want my efforts to reflect data driven decisions made with the most accurate information obtainable. As I said when I arrived, I will be making the areas of most concern to Flint residents my top priorities; the future of Flint's water supply, water system and the cost of operation and maintenance are as important to Flint residents as public safety or any other major obligations of a full service city such as Flint.

–CONTINUE–

CITY OF FLINT
OFFICE OF EMERGENCY MANAGER
DARNELL EARLEY

I also want to be transparent in what we glean from this exercise; through this initiative I will keep the public as informed on the process as I am as we go forth. It is for that reason that I plan to examine this issue with the help of an independent, third party consultant in order make a fair and impartial assessment. The goal of this assessment is to ensure that the long term costs of the KWA decision are accurately and openly reflected in the water rates charged to residents and businesses.

Water prices are a key concern to Flint water users, so as we look forward we want to provide them with an understanding of how they are set and to inform residents of available assistance. We currently have a poverty exemption for a portion of water and sewer charges available to low income homeowners and a lowered water deposit for low income renters. The City of Flint has done all that it can in the short term to ease the burden of water increases. Now is the time to look to the future; we want to ensure that our residents get the best possible service at the best cost through a sustainable system and a process that is self supporting for decades to come."

-Darnell Earley
Flint Emergency Manager

–END–

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1101 S. Saginaw Street - Flint, Michigan 48502
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City of Flint

Water Forum

5/30/2012

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City Of Flint Water History Facts

Current Treatment Plant was put into service in 1954.

Current 72" main pipeline was completed in 1970.

Flint signed a 30 year contract with Detroit water and Sewer Department in the mid 1960's.

The contract with DWSD has expired and we are currently operating on a yearly extension.

In 2006 Flint completed a $48,000,000 upgrade of the existing Water Plant. (Required by the MDEQ & for backup only).

Flint's Water & Sewer System is approximately a 300,000,000 Enterprise.

Flint's Water & Sewer System is designed to deliver water to over 200,000 people with over 1,500 miles of infrastructure.

Flint's most recent census count shows a population of approximately 102,000 in 2010.

Flint's census population in 2000 was approximately 124,000.

The water system had over 45,000 customers in June of 1999.

The water system had just over 36,000 customers by June 2011.

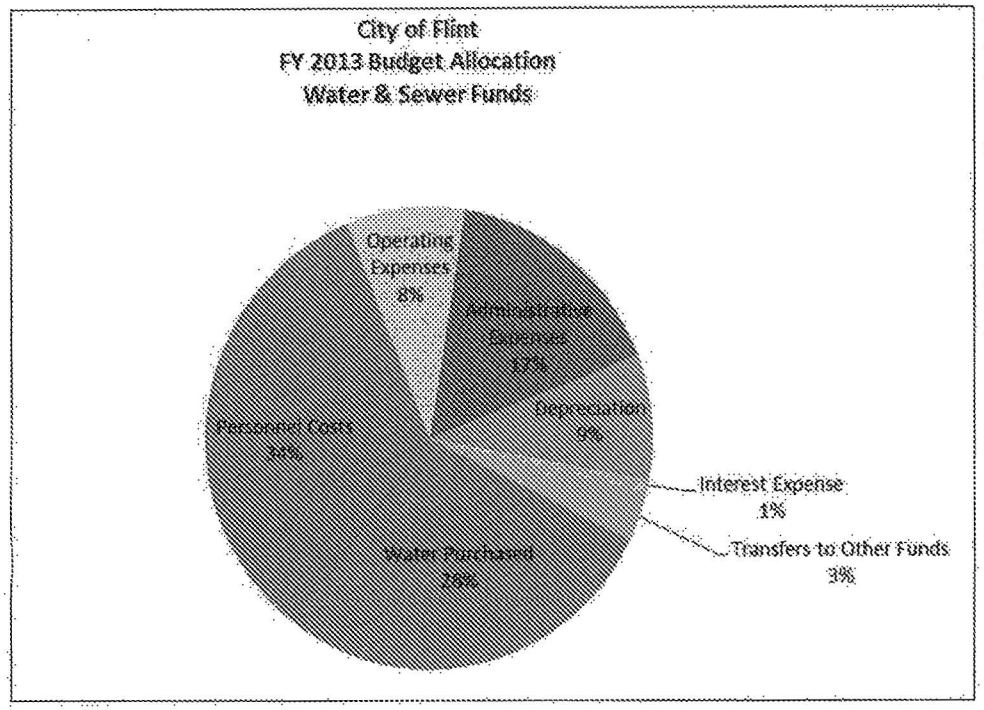
The "Fixed Costs" that must be covered to maintain the system and deliver quality water have increased over time.

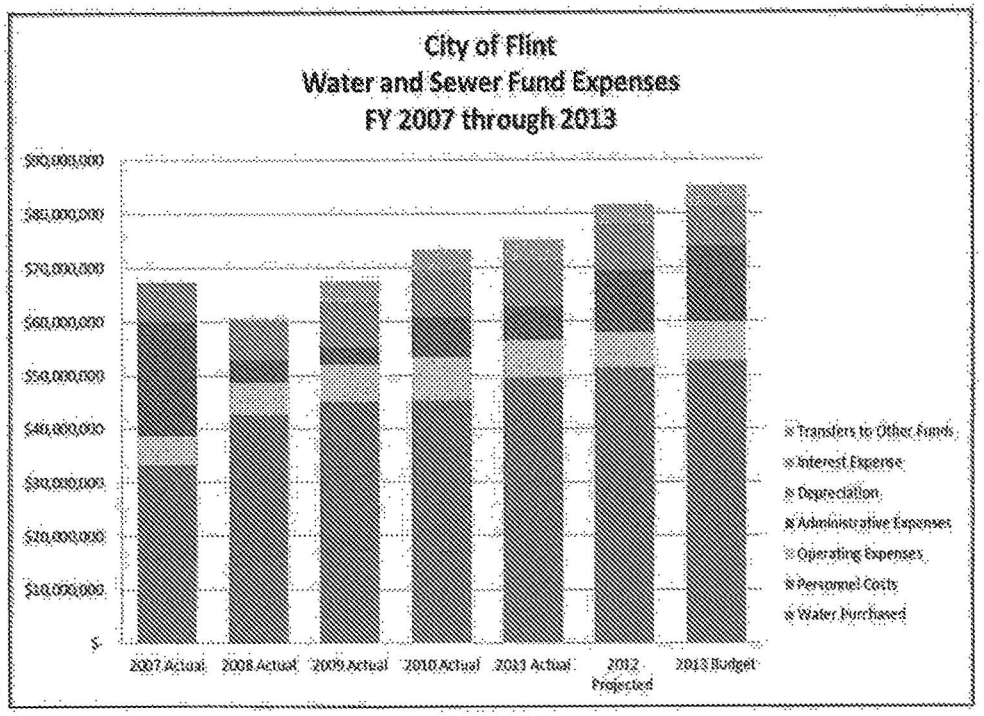
City Of Flint
Most Frequently Asked Questions about Water

- ❑Why are the water rates so high ?
- ❑How does my water bill work (Explanation of charges) ?
- ❑Why do others in the area pay less for the same amount of water ?
- ❑Where has all of the water and sewer fund money gone ?
- ❑What do I do if I think my bill is incorrect ?
- ❑What effect does leakage or theft have on my bill ?
- ❑How can I report water theft ?
- ❑Why don't we go back to using the Flint River like we once did ?

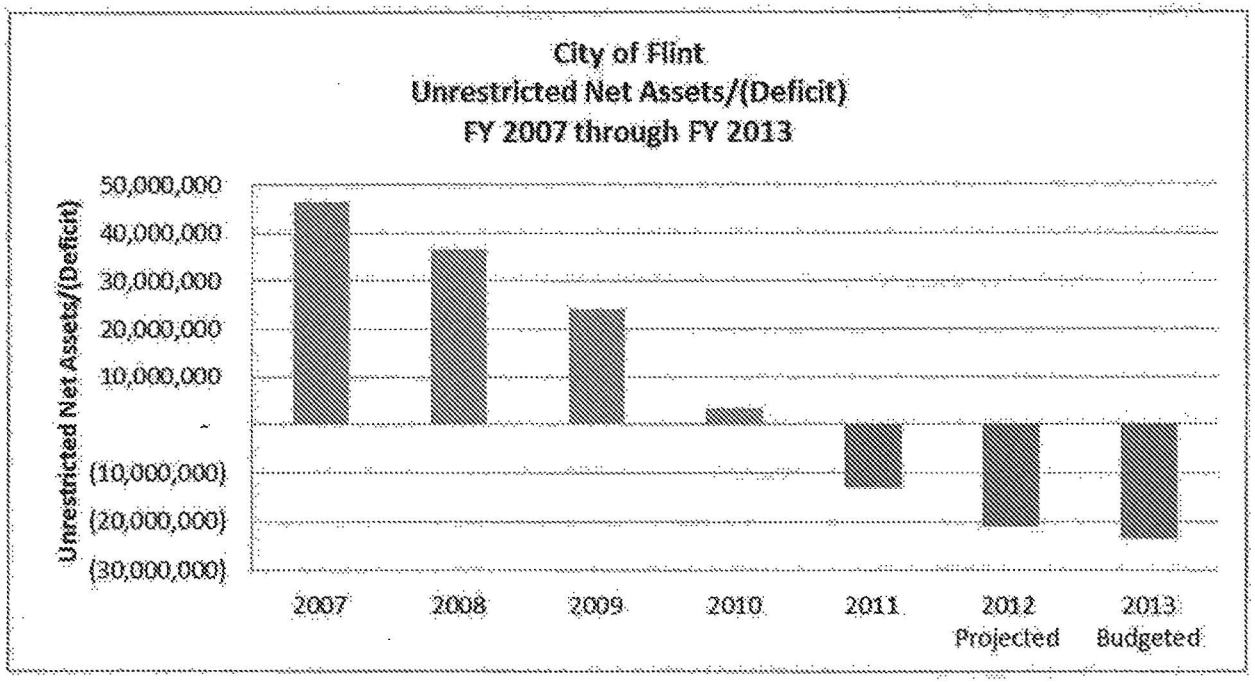
City of Flint

Budget Allocation and Fund Expenses





	Audited						
	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Projected	2013 Budget
Operating Revenues	51,090,679	51,100,332	51,906,553	47,926,589	54,385,644	67,983,044	81,734,552
Other Revenues	2,627,939	3,274,450	1,442,383	764,886	68,645	126,670	455,867
Annual Revenues	53,718,618	54,374,782	53,348,936	48,691,475	54,454,289	68,109,714	82,190,419
Water Purchased	16,052,006	16,297,871	17,421,663	17,103,752	20,919,987	21,756,787	24,031,417
Personnel Costs	17,292,444	26,302,590	27,591,206	28,149,946	28,618,817	29,640,499	28,546,350
Operating Expenses	5,355,638	6,145,119	6,950,534	8,146,390	6,917,964	6,420,260	7,259,290
Administrative Expenses	21,300,900	4,229,382	3,403,231	7,327,630	6,221,627	11,465,462	14,140,047
Depreciation	7,217,142	7,132,870	8,364,022	8,854,889	8,689,809	8,615,000	7,500,000
Interest Expense	86,632	485,499	868,031	812,270	754,890	705,150	644,314
Transfers to Other Funds	-	-	2,990,000	2,990,000	2,990,000	2,990,000	2,990,000
Annual Expenses	67,304,762	60,593,331	67,588,687	73,384,877	75,113,094	81,593,158	85,111,418



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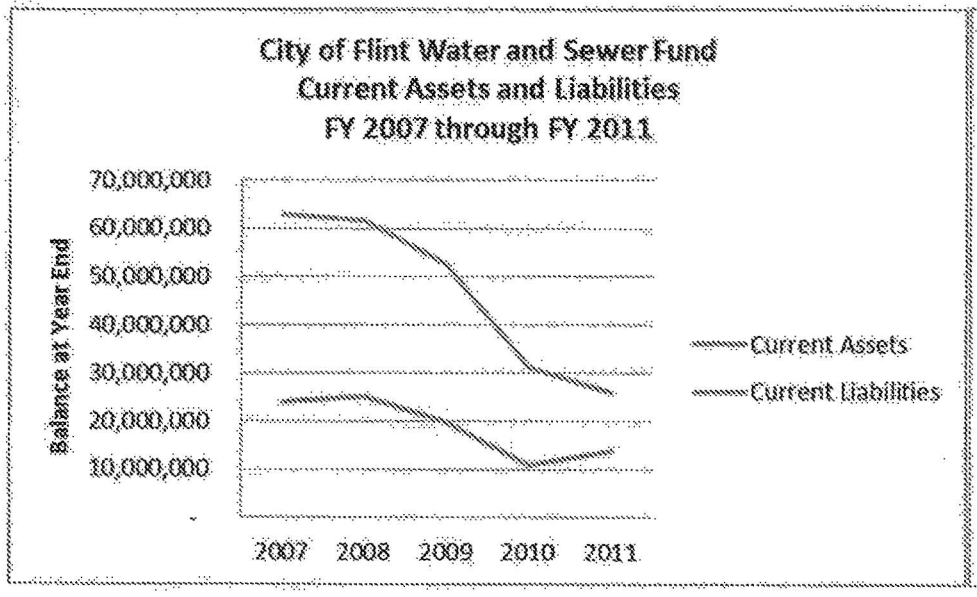
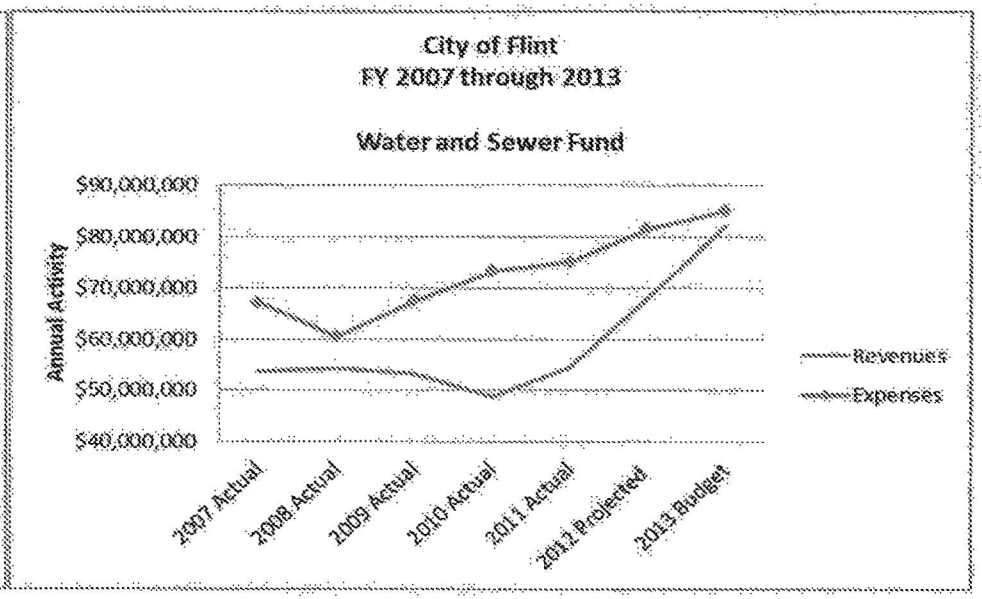
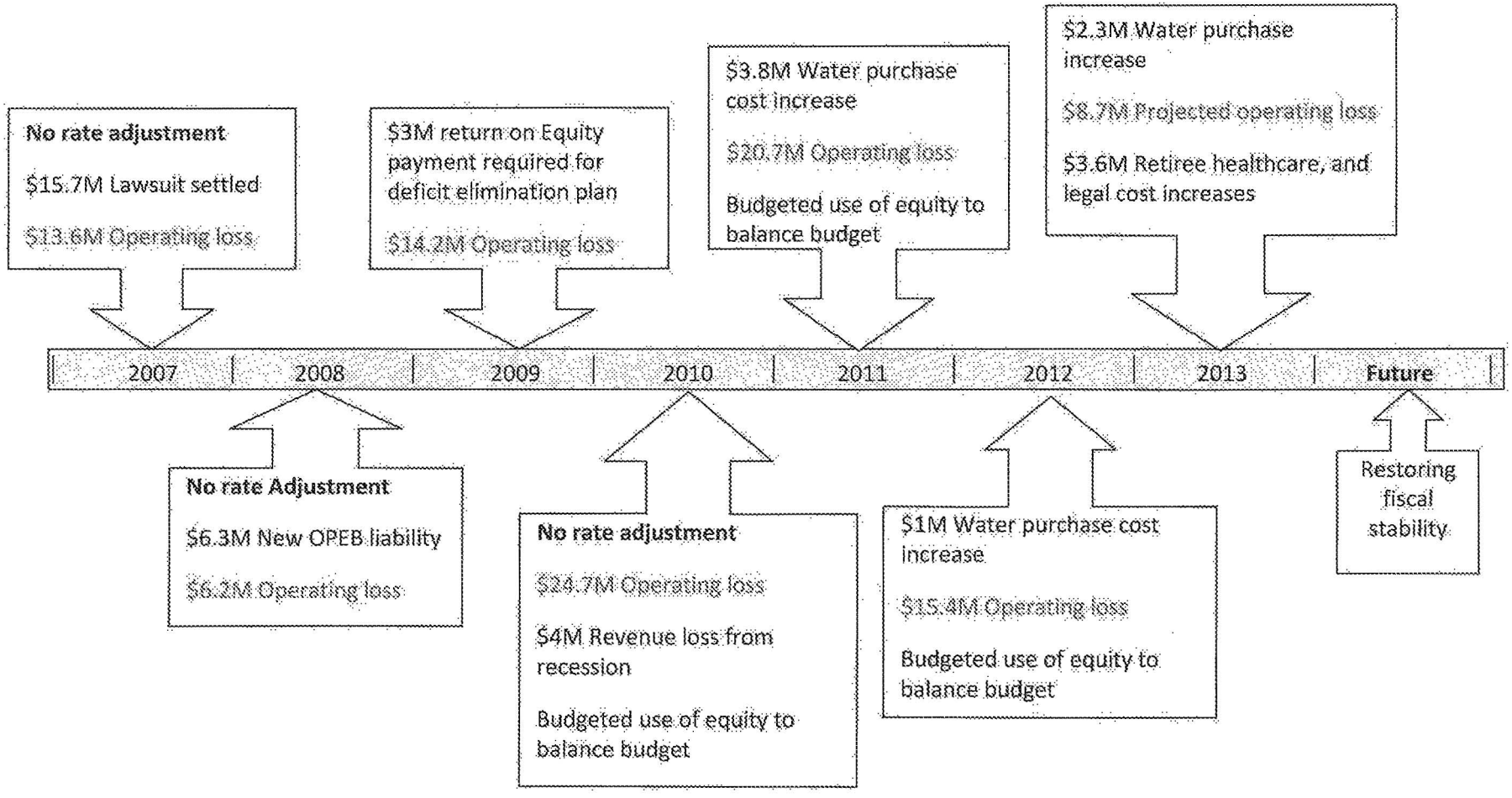




City of Flint

Recent Timeline of Water and Sewer Funds

FY 2007 through 2013



City of Flint- Water and Sewer System Additional Asset / Revenue Data

The average annual residential water sewer bill in FY2005 was less than $700 annually
The average annual residential water/ sewer bill in FY13 will be nearly $1,700

Expenses have exceeded revenues every year since 2006:

FISCAL YEAR	Rate Base	Revenues	Expenses	Revenues Minus Expenses	Unreserved System Equity	FACTORS IMPACTING SOLVENCY			COST IMPACT
2006	2005	$55,204,242	$50,933,792	**$4,270,450**	**$60,340,013**				
									(millions)
2007	2005	$53,856,857	$67,442,993	($13,586,136)	$46,399,452	No rate adjustment			??
						$15.7 million lawsuit settlement	15.7	0	$15.7
2008	2005	$54,374,781	$60,593,331	($6,218,550)	$36,482,488	No rate adjustment			??
						OPEB liabilities added	3.6	2.7	$6.3
2009	2009	$53,488,463	$67,728,218	($14,239,755)	$24,023,065	ROE payment added as part of City [	1.9	1.1	$3.0
2010	2009	$48,820,329	$73,513,725	($24,693,396)	$3,531,768	No rate adjustment			??
						Use of retained earnings budgeted	12.5	0.5	$13.0
						Revenue lost due to recession	2	2	$4.0
2011	2011	$54,527,079	$75,185,879	($20,658,800)	($12,868,907)	Use of retained earnings budgeted	7.1	3.5	$10.6
	2011					Water purchase cost increase	0	3.8	$3.8
2012		$68,279,187	$83,682,840	($15,403,653)	($20,694,122)	Use of retained earnings budgeted	5.1	0	$5.1
						Water purchase cost increase	0	0.8	$0.8
2013	2013	$82,220,420	$90,970,420	($8,750,000)	($23,379,690)	Water purchase cost increase	0	2.3	$2.3
						RHC/Legal/Admin Cost Allocation	2.1	1.5	$3.6
				($99,279,940)					$68.2

Calculation of Water and Sewer Rates for FY13 Budget

March, 2012:

	Expense Projection Based on FY12 Costs	Revenue Projection Based on FY12 Receipts	Difference Between Projected Revenues and Expenses	Rate Increase Necessary To Close Gap
Water	$49.9	$44.4	-$5.5	12.4%
Sewer	$31.0	$21.4	-$9.6	44.9%
TOTAL	$80.9	$65.8	-$15.1	22.9%

CITY of FLINT, MICHIGAN
WATER &/OR SEWER BILL

Service at: 5810 BALDWIN BLVD

TREASURER
CITY OF FLINT
P.O. BOX 1958
FLINT, MI 48501

PRESORTED
FIRST CLASS MAIL
US POSTAGE PAID
CITY OF FLINT

3419 Active

ACCOUNT NUMBER	DUE DATE
[redacted]	02/28/2012
	NET AMOUNT DUE
	147.85

Seq=3138

**AUTO [redacted]

RETURN THIS STUB WITH YOUR PAYMENT

00000376810000014785022820120000014913777O6

KEEP THIS PORTION FOR YOUR RECORDS

LAST READ/DATE/TYPE		NEW READ/DATE/TYPE		CONS	SERVICE	CHARGE
361	01/06/2012 A	363	02/03/2012 A	2	Sewer Non-metered	6.63
					Sewer Svc Chg	22.07
					Water	13.30
					Water Svc Chg	18.35

Prev. Balance	181.06
Payments	-75.00
Adjustments	0.00
Current Penalty	0.36
New Charges	61.41
Total Due	147.85
Due Date	02/28/2012

ACCOUNT: BALD-005810-0000-01 SERVICE AT [redacted]

PENALTY ASSESSED 30 DAYS AFTER DUE DATE

CITY OF FLINT
DEPARTMENT OF FINANCE

Customer Service Center

Dayne Walling
Mayor

Douglas Bingaman
Treasurer

CITY OF FLINT
WATER NON-PAYMENT TURN-OFF POLICY

1. Water services to any customer may be shut off if the account is not paid until after 30 days after the due date. (City ordinance 46-52 (h))

2. Non-payment turn-offs are done only Monday through Thursday. The Customer Service Center does not schedule non-payment turn-offs on Fridays, Saturdays, Sundays, or most recognized holidays.

3. Illegal usage, broken payment arrangements and NSF (non-sufficient funds) turn-offs are done at any time without additional notice.

4. Turn-off notices are mailed to delinquent customers fifteen (15) days before actual turn-off.

5. The water customer is responsible for maintenance of all plumbing in the premises including connection to City water mains or sewer lines.

6. If a customer disputes a water bill and is unable to resolve the issue with Customer Service personnel, the customer may request an administrative review. Further information on any water account may be obtained by calling (810) 766-7015 or visiting the Customer Service Center at 1st Floor, City Hall, 1101 S. Saginaw St.

Preliminary Options for Future City of Flint Water Sources

Consider a New Negotiated Contract with Detroit Water and Sewer Department

PRO'S	CON'S
No upfront capital costs	Lack of control over new / fixed changes
Possibility to negotiate a lower rate	Past practices
Ability to "Blend" water sources to further control costs	

Consider a Contract with the Karegnondi Water Authority

PRO'S	CON'S
Voting member of KWA board	Capital cost (debt service)
Ability to "Blend" water sources to further control costs	Uncertainty of final costs
Raw water is an asset for attracting new buisnesses	

Blended Use of the Flint River

PRO'S	CON'S
Helps control cost of water	

*** CURRENTLY NO DECISIONS HAVE BEEN MADE REGARDING THE FUTURE WATER SOURCE

Improvements for City of Flint Water System

Reduce Leakage

▪**Finalize a Preventative Maintenance Plan**
- ➢ (Planning started in January 2012, requires funding, … part of Operational Costs)
- ➢ Will help identify repair area's

▪**Reduce water theft**

▪**Replace water meters**
➢We currently have an eighteen month plan to replace all meters with more efficient "*Smart Meters*"

▪**Encourage routine household checks**
➢"Faulty" toilets are a significant reason for household water loss. and unexpected larger bills.

Other Leakage concerns

✓Transmission Loss

✓Fire Hydrants

✓Incorrect water bills

✓Non-Payment

CITY OF FLINT, MICHIGAN
Department of Finance

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1101 South Saginaw Street
Flint, MI 48502
(810) 766-7268 / (810) 766-8675 (fax)

Dayne Walling
Mayor

Edward J. Kurtz
Emergency Financial Manager

Michael K. Brown
City Administrator

Gerald Ambrose
Finance Director

October 31, 2012

Edward J Kurtz
Emergency Financial Manager
City Of Flint Municipal Center
1101 S. Saginaw Street
Flint, MI 48502

RE: Cost Comparison, KWA v DWSD

Mr. Kurtz:

The City of Flint is considering whether joining the Karegnondi Water Authority (KWA) is a better alternative for the residents and businesses of Flint than continuing to purchase water from the Detroit Water and Sewer District (DWSD).

An important part of this consideration is the relative cost of the alternatives. We have compared the current projected costs of continuing to purchase water from DWSD to the projected costs of purchasing water from KWA.

The projected costs of purchasing water from DWSD come from our current and past experience, as well as statements from DWSD about their future costs. The costs of purchasing water from KWA are based on the KWA Lake Huron Water Supply Study, as updated by its October 2012 Preliminary Engineering Report Update, Appendix 20, dated October 4, 2012.

Based on the current contract with DWSD, the FY13 cost of purchasing water for the City of Flint only (excluding the sale of water to Genesee County) is budgeted at $14.4 million. Past experience indicates that it is reasonable to assume a 10% increase annually in the capacity charge from DWSD and a 5% increase in the commodity cost. It is also reasonable to assume a 5% increase in operational costs for the Flint Water Treatment Plant. Consequently, it appears that the costs for continuing to purchase water from DWSD will increase to $22.7 million by FY20.

Conversely, joining KWA and participating in the construction of infrastructure to receive water will require an up-front cost to the City of $2.3 million, to be paid over the first three years of joining. This would be paid by the City during the construction period while the City continues to purchase its water from DWSD. However, once the construction is complete and water delivery commences, the City's capacity charge will be fixed, based on the debt service necessary to finance construction. Operational costs for KWA water delivery and the Flint WTP are projected to increase by 5% annually.

Based on the assumptions in this comparison, the annual projected cost of purchasing water for the City of Flint is 15% or $2.6 million LESS using the KWA option in the first year of operation, increasing to 27% or $6.1 million LESS in the fifth year of operation. The only caveat is that in order to achieve this, the City will need to upfront KWA $3.25 million over 3 years prior to KWA beginning water delivery.

Concerns have been raised about the potential of cost overruns and delays in construction. These are reasonable concerns. An additional analysis, assuming a 15% cost overrun, and a one-year delay in construction, indicates that the gain to be achieved from participating in KWA is lessened (from $2.6 million in the first year to $2.3 million) and the City's upfront contribution is increased to $10.4 million if the City is required to make its first year's debt service payment before operations begin. The City's gain from participating in KWA is delayed, but once operations begin, the City's annual costs are less than continuing with DWSD, becoming net positive in FY20. However, given the City's precarious financial position, it is likely that the City would need to find some source of capital if such an up-front payment were necessary.

Finally, we have also analyzed what constraints DWSD would need to impose on its contract with the City of Flint in order to be a positive financial option. It would appear that if the capacity costs to Flint were to be fixed at the FY13 level and if annual operating cost increases were capped at 2.25%, then the cost to the City of Flint could be less than KWA.

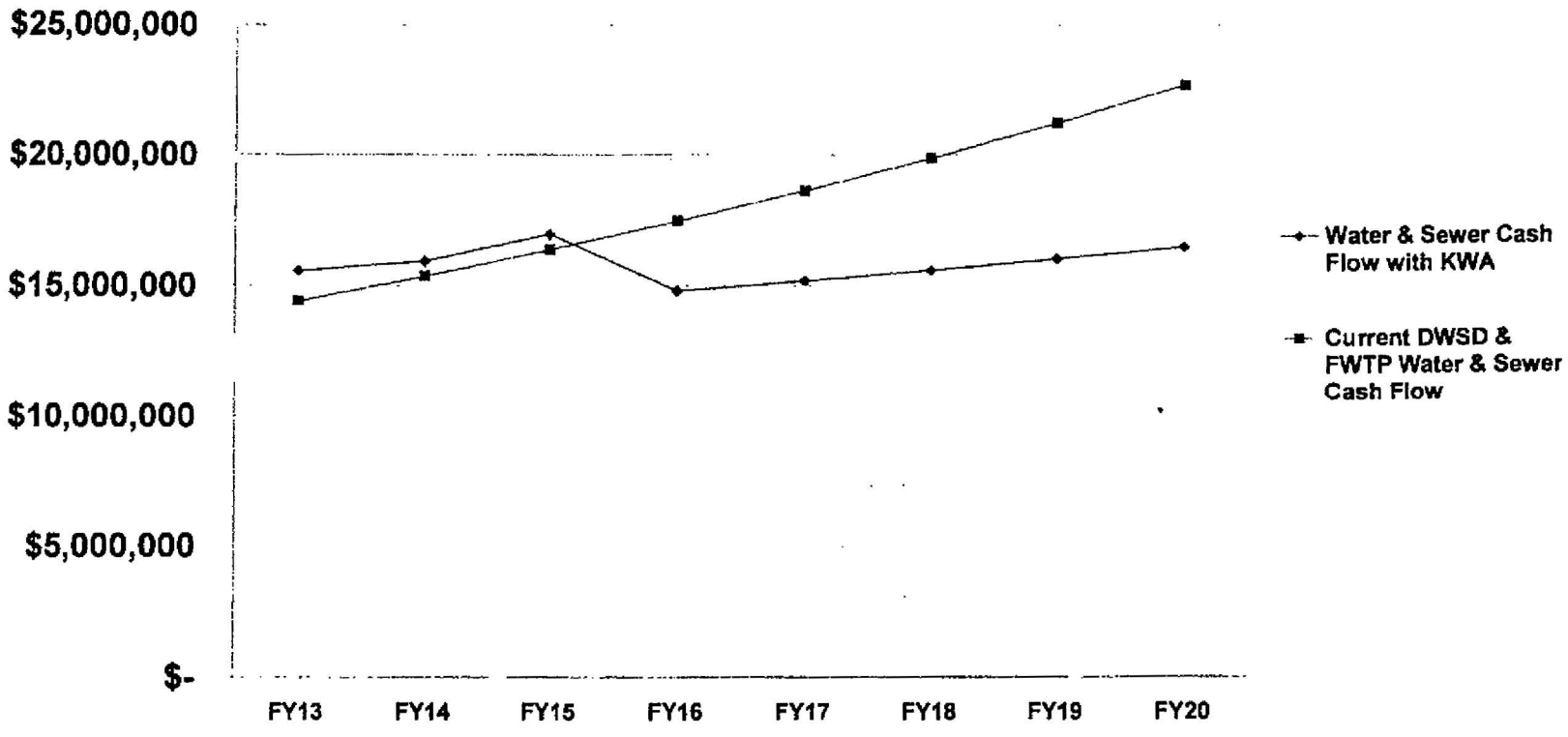
Attached are the three projections summarized above. First is the "Original Projection" utilizing the KWA Study. Second is the "Worse Case Projection" with cost increases and construction delays. Third is the reduced DWSD costs associated with fixed capacity costs and capped increases in operational costs.

Please contact me if you have any questions.

Gerald Ambrose
Director of Finance

GA:js
Attachments

Original Projection - Summary Comparison: KWA vs DWSD



FINAL 10/31/2012

ORIGINAL PROJECTION
SUMMARY COMPARISON: KWA V DWSD

Water and Sewer Cash Flow with KWA

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ -	$ -	$ -	$ -	$ -
KWA Entry Fee	$ 1,162,800	$ 581,400	$ 581,400	$ -	$ -	$ -	$ -	$ -
KWA Debt Service	$ -	$ -	$ -	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155
FWTP Debt Service	$ -	$ -	$ -	$ 572,781	$ 572,781	$ 572,781	$ 572,781	$ 572,781
KWA operations	$ -	$ -	$ -	$ 878,869	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
FWTP operations w KWA	$ -	$ -	$ -	$ 6,843,344	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Total Costs	$ 15,576,658	$ 15,936,535	$ 16,946,934	$ 14,888,149	$ 15,274,260	$ 15,679,676	$ 16,105,363	$ 16,552,334

Water and Sewer Cash Flow with DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ 17,450,717	$ 18,616,851	$ 19,870,650	$ 21,219,435	$ 22,671,185

Cash Flow Difference: KWA and DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Annual Cost: DWSD - KWA	$ (1,162,800)	$ (581,400)	$ (581,400)	$ 2,562,568	$ 3,342,591	$ 4,190,974	$ 5,114,072	$ 6,118,851
Cumulative Gain with KWA	$ (1,162,800)	$ (1,744,200)	$ (2,325,600)	$ 236,968	$ 3,579,559	$ 7,770,533	$ 12,884,605	$ 19,003,456

(1) This projection assumes that KWA begins delivery of water to Flint starting in July, 2016. Any interest on the bonds will be capitalized until that period. The City will be obligated to begin paying its $2,325,600 entry fee in FY13 - 2 payments of $581,400 in FY13, 1 payment in FY14 and 1 payment in FY15.

(2) The cost of the KWA option is projected to be $2,562,568 or 15% LESS than DWSD in the first year of operation (Year 4). This gain offsets the upfront costs of $2,325,600 by $236,968.

(3) The cost of the KWA option is projected to be $6.1 million or 27% LESS than DWSD in the 5th year of operation (Year 8)

(4) The cumulative savings by the 8th year from the beginning of the project are projected to be $19 million.

Detail of Original Cost Projections FINAL 10/31/2012

Cost Comparisons: Water Supply to City of Flint from DWSD and proposed KWA project

Cost of water to City of Flint (excluding Genesee) using continued service from DWSD

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Fixed Cost (1)	$ 4,411,660	$ 4,852,848	$ 5,338,133	$ 5,871,946	$ 6,459,141	$ 7,105,055	$ 7,815,560	$ 8,597,116
Escalator	1.10	1.10	1.10	1.10	1.10	1.10	1.10	
Commodity Cost (2)	$ 7,276,640	$ 7,640,472	$ 8,022,496	$ 8,423,620	$ 8,844,801	$ 9,287,041	$ 9,751,394	$ 10,238,963
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
Flint WTP Operating Cost (3)	$ 2,725,538	$ 2,861,815	$ 3,004,906	$ 3,155,151	$ 3,312,908	$ 3,478,554	$ 3,652,482	$ 3,835,106
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ 17,450,717	$ 18,616,851	$ 19,870,650	$ 21,219,435	$ 22,671,185

(1) Per FY13 Budget and DWSD Contract, fixed charge from DWSD for FY13 is $707,000 per month or $8.5 million total. Flint's cost is 52% or $4.4 million total.

(2) Per FY13 Budget and DWSD Contract, and based on 12 million gallons per day (mgd), cost is $7 3 million, based on $12.46/unit ($12.46x1600unitsx365).

(3) Per FY13 Budget, annual cost of WTP is $4.1 million. Genesee County pays $1,386,000 for emergency back up service.

Cost of water to City of Flint using proposed KWA project for water supply to Flint WTP

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
KWA Entry Costs (1)	$ 1,162,800	$ 581,400	$ 581,400		$ -	$ -	$ -	$ -
Fixed KWA Construction Cost (2)				$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155
Escalator				1.00	1.00	1.00	1.00	
Fixed Flint WTP Construction Cost (3)				$ 572,781	$ 572,781	$ 572,781	$ 572,781	$ 572,781
Escalator				1.00	1.00	1.00	1.00	
Flint WTP Operating Cost (4)	$ 5,911,538	$ 6,207,115	$ 6,517,471	$ 6,843,344	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
KWA Commodity Charge (5)	$ 759,200	$ 797,160	$ 837,018	$ 878,869	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	KWA NOT AVAILABLE			$ 14,888,149	$ 15,274,260	$ 15,679,676	$ 16,105,363	$ 16,552,334

(1) The City will, upon joining, be required to pay an initial fee of $32,300 per MGD plus the same amount for each year until bonding for the project is obtained. At 18MGD, the City's cost is $581,400 annually. Since it is projected that fee will be assessed for 3 years, the City's upfront cost is projected at $2,325,600.

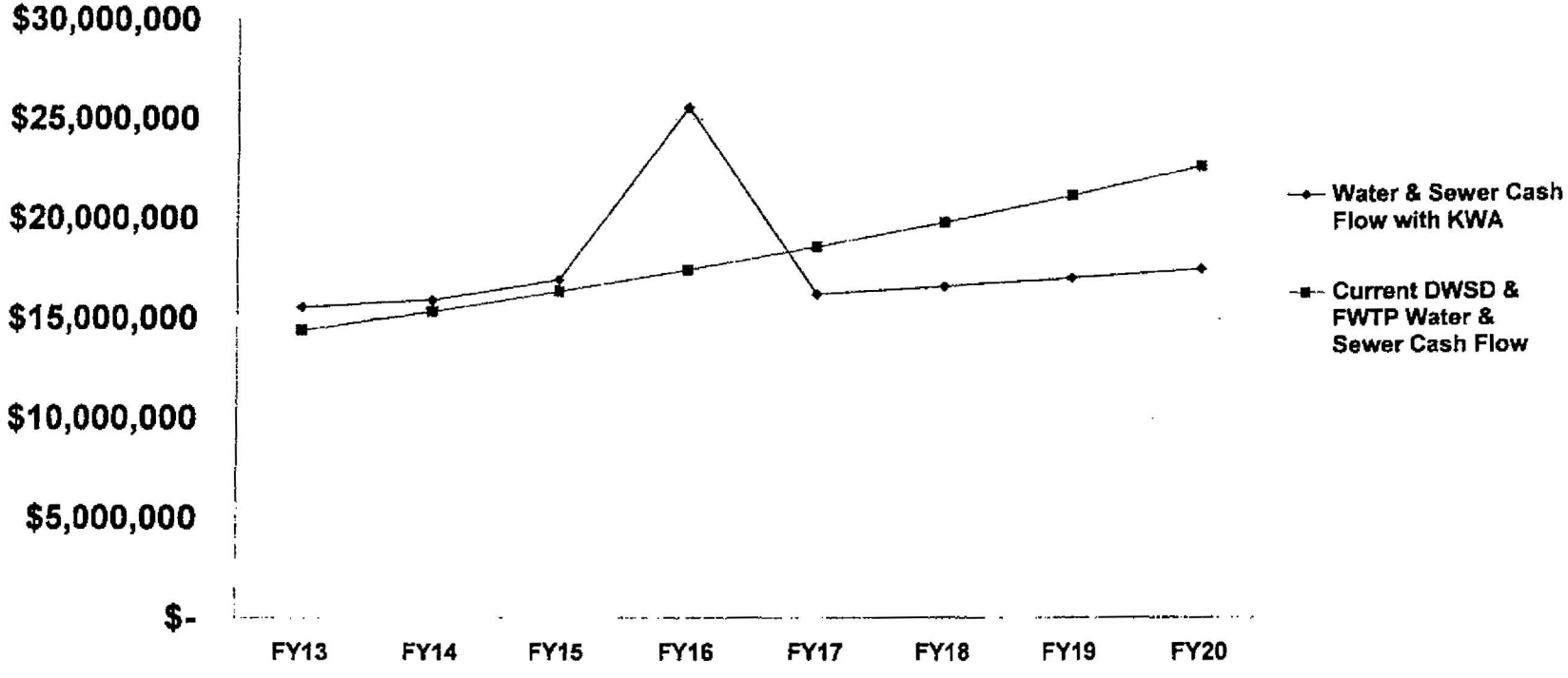
(2) Per KWA proposal, project cost is $272 million. City's fixed cost would be 30% of debt service, based on capacity design of 60mgd, of which 18MGD is for Flint. Debt service is based on 5% interest rate @ 25 years; 5% added to principal for capitalized interest for FY13, FY14, and FY15. ($272,421,588 plus $13,621,078 for 3 years = $313,284,792)

(3) Per KWA proposal, the cost of upgrading the Flint is $7.1 million. City's fixed cost would be100% of debt service based on 5% interest rate @ 25 years), with 5% added to cover capitalized interest for FY13, FY14, and FY15. (total principal = $8.165 million)

(4) Per FY13 Budget annual cost of WTP is $4,111,538. $1.6 million for electricity and chemicals & 2 FTE's are added. 100% City cost. 100%

(5) Per KWA proposal, initial commodity charge would be based on $1.30/unit or 7,500 gallons. Charge is based on 12MGD.

Worst Case Scenario - Summary Comparison KWA vs DWSD (15% Cost Overrun; One year delay in Water Supply delivery)



FINAL 10/31/2012

WORSE CASE PROJECTION
SUMMARY COMPARISON: KWA V DWSD
(15% Cost Overrun; One year delay in Water Supply delivery)

Water and Sewer Cash Flow with KWA

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ 17,450,717	$ -	$ -	$ -	$ -
KWA Entry Fee	$ 1,162,800	$ 581,400	$ 581,400	$ -	$ -	$ -	$ -	$ -
KWA Debt Service	$ -	$ -	$ -	$ 7,582,128	$ 7,582,128	$ 7,582,128	$ 7,582,128	$ 7,582,128
FWTP Debt Service	$ -	$ -	$ -	$ 658,698	$ 658,698	$ 658,698	$ 658,698	$ 658,698
KWA operations	$ -	$ -	$ -	$ -	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
FWTP operations w KWA	$ -	$ -	$ -	$ -	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Total Costs	$ 15,576,658	$ 15,936,535	$ 16,946,934	$ 25,691,544	$ 16,349,150	$ 16,754,566	$ 17,180,253	$ 17,627,226

Water and Sewer Cash Flow with DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ 17,450,717	$ 18,616,861	$ 19,870,660	$ 21,219,436	$ 22,671,185

Cash Flow Difference: KWA and DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Annual KWA - DWSD	$ (1,162,800)	$ (581,400)	$ (581,400)	$ (8,240,826)	$ 2,267,700	$ 3,116,094	$ 4,039,182	$ 5,043,960
Cumulative	$ (1,162,800)	$ (1,744,200)	$ (2,325,600)	$ (10,566,426)	$ (8,298,726)	$ (5,182,642)	$ (1,143,460)	$ 3,900,500

"Worse Case" scenario differs from Original in these respects:

(1) Delivery of water to Flint from KWA is delayed by one year and construction costs are 15% above the original projection. Consequently, the City is required to begin paying for debt service one year before KWA begins delivery of water. This is in addition to its obligation to pay its initial entry fee of $581,400 plus $581,400 annually for the first 3 years.

(2) Once KWA begins delivering water in year 5, the annual operating costs are less than DWSD by 12%. Considering $10.6 million in upfront costs in the first 4 years prior to KWA operation, the cumulative cost of KWA exceeds the cost of DWSD until year 8.

(3) Cumulative savings by Year 8 are projected to be $3.9 million, compared to $19 million in the original projection.

Detail of Worse Case Cost Projections

FINAL 10/31/2012

Worse Case Scenerio

Cost Comparisons: Water Supply to City of Flint from DWSD and proposed KWA project

Cost of water to City of Flint (excluding Genesee) using continued service from DWSD

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Fixed Cost (1)	$ 4,411,680	$ 4,852,848	$ 5,338,133	$ 5,871,946	$ 6,459,141	$ 7,105,055	$ 7,815,560	$ 8,597,116
Escalator	1.10	1.10	1.10	1.10	1.10	1.10	1.10	
Commodity Cost (2)	$ 7,276,640	$ 7,640,472	$ 8,022,496	$ 8,423,620	$ 8,844,801	$ 9,287,041	$ 9,751,394	$ 10,238,963
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
Flint WTP Operating Cost (3)	$ 2,725,538	$ 2,861,815	$ 3,004,906	$ 3,155,151	$ 3,312,908	$ 3,478,554	$ 3,652,482	$ 3,835,106
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	$ 14,413,858	$ 15,355,135	$ 16,365,534	$ 17,450,717	$ 18,616,851	$ 19,870,650	$ 21,219,436	$ 22,671,185

(1) Per FY13 Budget and DWSD Contract, fixed charge from DWSD for FY13 is $707,000 per month or $8.5 million total Flint's cost is 52% or $4.4 million total.

(2) Per FY13 Budget and DWSD Contract, and based on 12 million gallons per day (mgd), cost is $7.3 million, based on $12.46/unit ($12.46x1600unitsx365)

(3) Per FY13 Budget, annual cost of WTP is $4.1 million. Genesee County pays $1,386,000 for emergency back up service

Cost of water to City of Flint using proposed KWA project for water supply to Flint WTP

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
KWA Entry Costs (1)	$ 1,162,800	$ 581,400	$ 581,400	$ -	$ -	$ -	$ -	$ -
Fixed KWA Construction Cost (2)				$ 7,582,128	$ 7,582,128	$ 7,582,128	$ 7,582,128	$ 7,582,128
Escalator						1.00	1.00	
Fixed Flint WTP Construction Cost (3)				$ 658,698	$ 658,698	$ 658,698	$ 658,698	$ 658,698
Escalator								
Flint WTP Operating Cost (4)	$ 5,911,538	$ 6,207,115	$ 6,517,471	$ 6,843,344	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
KWA Commodity Charge (5)	$ 759,200	$ 797,160	$ 837,018	$ 878,869	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	KWA NOT AVAILABLE				$ 16,349,150	$ 16,754,566	$ 17,180,253	$ 17,627,225

(1) The City will, upon joining, be required to pay a, initial fee of $32,300 per MGD plus the same amount for each year until bonding for the project is obtained. At 18MGD, the City's cost is $581,000, for a total of $2,325,600..

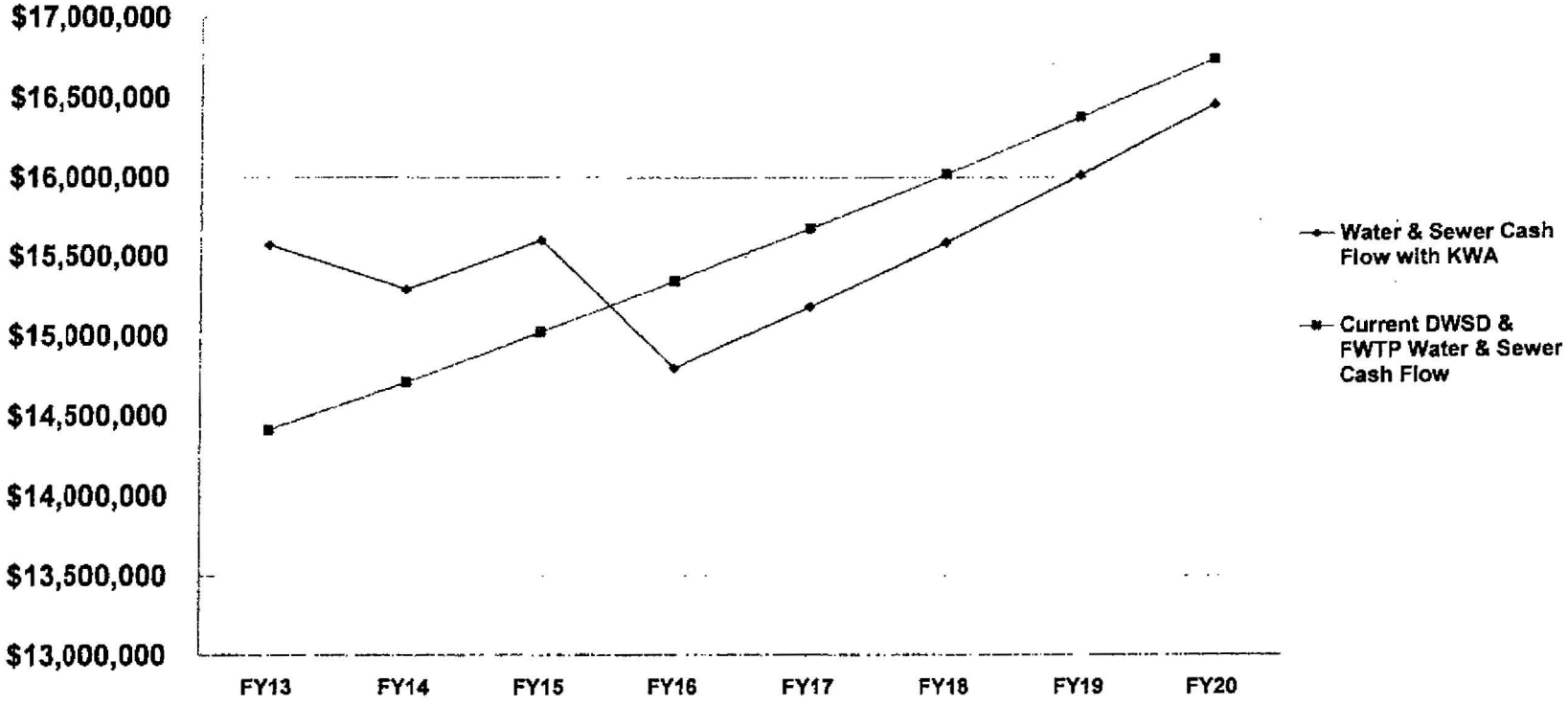
(2) Per KWA proposal, original project cost is $272 million. City's fixed cost would be 30% of debt service, based on capacity design of 60mgd, of which 18MGD is for Flint. Debt service is based on 5% interest rate @ 25 years; 5% added to principal for capitalized interest for FY13, FY14, and FY15. ($272,421,588 plus $13,621,078 for 3 years = $313,284,792). **The costs here are increased by 15%; debt service starts in FY16 but water is not available until FY17.**

(3) Per KWA proposal, the cost of upgrading the Flint is $7.1 million. City's fixed cost would be100% of debt service based on 5% interest rate @ 25 years), with 5% added to cover capitalized interest for FY13, FY14, and FY15. (total principal = $8.165 million). **Again, costs here are increased by 15%; debt service starts in FY16 but water is not available until FY17. Debt service is now on $9.4 million.**

(4) Per FY13 Budget annual cost of WTP is $4,111,538. $1.6 million for electricity and chemicals & 2 FTE's are added. 100% City cost.

(5) Per KWA proposal, initial commodity charge would be based on $1.30/unit or 7,500 gallons. Charge is based on 12MGD.

ALTERNATE PROJECTION - SUMMARY COMPARISON: KWA V DWSD WITH DWSD COSTS REDUCED (Fixed Costs held constant; Commodity Costs Increased by 2.25% Annually)



FINAL 10/31/2012

ALTERNATE PROJECTION
SUMMARY COMPARISON: KWA V DWSD WITH DWSD COSTS REDUCED
(FIXED COSTS HELD CONSTANT; COMMODITY COSTS INCREASED BY 2.25% ANNUALLY)

Water and Sewer Cash Flow with KWA

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 14,713,859	$ 15,024,358	$ -	$ -	$ -	$ -	$ -
KWA Entry Fee	$ 1,162,800	$ 581,400	$ 581,400	$ -	$ -	$ -	$ -	$ -
KWA Debt	$ -	$ -	$ -	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155
FWTP Debt	$ -	$ -	$ -	$ 572,781	$ 572,781	$ 572,781	$ 572,781	$ 572,781
KWA operations	$ -	$ -	$ -	$ 878,869	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
FWTP operations w KWA	$ -	$ -	$ -	$ 6,843,344	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Total Costs	$ 15,576,658	$ 15,295,259	$ 15,605,758	$ 14,888,149	$ 15,274,260	$ 15,679,676	$16,105,363	$ 16,552,334

Water and Sewer Cash Flow with DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	$ 14,413,858	$ 14,713,859	$ 15,024,358	$ 15,345,778	$ 15,678,562	$ 16,023,172	$16,380,091	$ 16,749,823

Cash Flow Difference: KWA and DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Annual Cost: DWSD - KWA	$ (1,162,800)	$ (581,400)	$ (581,400)	$ 457,629	$ 404,302	$ 343,496	$ 274,728	$ 197,489
Cumulative Gain with KWA	$ (1,162,800)	$ (1,744,200)	$ (2,325,600)	$ (1,867,971)	$ (1,463,669)	$ (1,120,173)	$ (845,445)	$ (647,956)

(1) This projection assumes that DWSD fixed costs remain at 2013 levels and that operating costs increase by 2.25% annually

(2) KWA costs are as in the Original Projection.

(3) In this comparison, KWA costs are still less once operations begin (by 2.9%), and cumulative gain does not occur until after year 8. Over time, DWDS costs could be less with these limitations on cost increases.

Detail of Cost Projections

FINAL 10/31/2012

Cost Comparisons: Water Supply to City of Flint from DWSD and proposed KWA project
(FIXED COSTS HELD CONSTANT; COMMODITY COSTS INCREASED BY 2.25% ANNUALLY)

Cost of water to City (excluding Genesee) using continued service from DWSD with modified escalator

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Fixed Cost (1)	$ 4,411,680	$ 4,411,680	$ 4,411,680	$ 4,411,680	$ 4,411,680	$ 4,411,680	$ 4,411,680	$ 4,411,680
Escalator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Commodity Cost (2)	$ 7,276,640	$ 7,440,364	$ 7,607,773	$ 7,778,947	$ 7,953,974	$ 8,132,938	$ 8,315,929	$ 8,503,038
Escalator	1.0225	1.0225	1.0225	1.0225	1.0225	1.0225	1.0225	
Flint WTP Operating Cost (3)	$ 2,725,538	$ 2,861,815	$ 3,004,906	$ 3,155,151	$ 3,312,908	$ 3,478,554	$ 3,652,482	$ 3,835,106
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	$ 14,413,858	$ 14,713,859	$ 15,024,358	$ 15,345,778	$ 15,678,562	$ 16,023,172	$16,380,091	$ 16,749,823

Cost of water to City of Flint using proposed KWA project for water supply to Flint WTP

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
KWA Entry Costs (1)	$ 1,162,800	$ 581,400	$ 581,400		$ -	$ -	$ -	$ -
Fixed KWA Construction Cost (2)				$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155	$ 6,593,155
Escalator				1.00	1.00	1.00	1.00	
Fixed Flint WTP Construction Cost (3)				$ 572,781	$ 572,781	$ 572,781	$ 572,781	$ 572,781
Escalator				1.00	1.00	1.00	1.00	
Flint WTP Operating Cost (4)	$ 5,911,538	$ 6,207,115	$ 6,517,471	$ 6,843,344	$ 7,185,511	$ 7,544,787	$ 7,922,026	$ 8,318,128
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
KWA Commodity Charge (5)	$ 759,200	$ 797,160	$ 837,018	$ 878,869	$ 922,812	$ 968,953	$ 1,017,401	$ 1,068,271
Escalator	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
TOTAL	KWA NOT AVAILABLE			$ 14,888,149	$ 15,274,260	$ 15,679,676	$16,105,363	$ 16,552,334

Subject:	Flint Water Task Force Meeting
Location:	PSC offices in downtown Lansing--230 North Washington, 3rd floor
Start:	Wed 10/28/2015 10:00 AM
End:	Wed 10/28/2015 12:00 PM
Recurrence:	(none)
Organizer:	Baird, Richard (GOV)

From: Darnell Earley <dearley@cityofflint.com>
Sent: Friday, October 31, 2014 11:50 AM
To: Baird, Richard (GOV)
Subject: Fwd: Thank You!

Good Morning Rich:

Just as an FYI, we had a very productive meeting. If you would like a briefing, please give me call.

Have a good weekend!

Darnell Earley, ICMA-CM, MPA
Emergency Manager
Flint, MI

---------- Forwarded message ----------
From: **Darnell Earley** <dearley@cityofflint.com>
Date: Fri, Oct 31, 2014 at 11:43 AM
Subject: Thank You!
To: wyantd@michigan.gov
Cc: Dayne Walling <dwalling@cityofflint.com>, "Workman, Wayne (TREASURY)" <workmanw@michigan.gov>, "Byrne, Randall (Treasury)" <ByrneR1@michigan.gov>, "Koryzno, Edward (Treasury)" <koryznoe@michigan.gov>, Kelly Rossman-McKinney <krossman@truscottrossman.com>, Elizabeth Murphy <emurphy@cityofflint.com>, "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>

Good Morning Director Wyant:

I wanted to take just a moment to thank you and your team for travelling to Flint Wednesday to meet with me, the Mayor, and the Utilities Department staff.

Everyone on our end appreciated the opportunity to meet directly with you and your key staff at the DEQ. We all felt it was a very productive discussion of the many difficult issues facing the City of Flint not only during this transition, but as its own long-term, sustainable water supply and distribution system, leading towards full implementation of the KWA project. As you know Flint is slated to convert to the KWA water source well within the next 18 month timeline. Until that happens however, I think you would agree that we have an excellent opportunity here to send a good, positive message about how the City is managing its water services, and working very closely with your office in the process.

As we discussed, an initial media hit from your office fairly soon would also help us build public confidence through stronger communication on how we are responding to the challenges we encounter, your department's support of our efforts to resolve them, and the resultant potability of the current water source. If there are other next steps you need from us regarding such a media release, please don't hesitate to contact me.

We look forward to our continued partnership in addressing these and other matters critical to environmental quality in the City of Flint and the State of Michigan!

Sincerely,

Darnell Earley, ICMA-CM, MPA
Emergency Manager
Flint, MI

From: Daddow, Robert <daddowr@oakgov.com>
Sent: Friday, February 20, 2015 3:50 PM
To: Baird, Richard (GOV); Saxton, Thomas (Treasury)
Subject: FW: Response to City of Flint Council Member Freeman
Attachments: Flint.Councilmember Joshua M Freeman.Feb 19 2015.pdf

FYI -- just received the attached letter on Flint. RJD

From: Rechanda Willis [mailto:willis@dwsd.org]
Sent: Friday, February 20, 2015 3:23 PM
To: James Fausone; Robert Daddow
Subject: Response to City of Flint Council Member Freeman

Attached is copy of the response to City of Flint Council Member Joshua Freeman's February 3, 2015 letter.

Thank you

Rechanda L. Willis
Assistant to the Deputy Director/Chief Customer Service Officer
Detroit Water and Sewerage Department
735 Randolph Street - Room 506
Detroit, Michigan 48226
(313) 224-4785 (office)
(313) 224-6067 (fax)
willis@dwsd.org

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
OFFICE OF THE DIRECTOR

735 RANDOLPH STREET
DETROIT, MICHIGAN 48226-2830
WWW.DETROITMI.GOV

February 19, 2015

The Honorable Joshua M. Freeman, Councilmember
City of Flint, Michigan
1101 S. Saginaw Street
Flint, Michigan 48502

Dear Councilman Freeman:

Regarding: Your letter of February 3, 2015

Thank you for your letter of February 3, 2015 in which you seek additional information related to the Detroit Water and Sewerage Department's ("DWSD") offer to resume supplying drinking water to the City of Flint. Specifically, you have asked several follow-up questions related to the nature of the long-term arrangement I referenced within my letter, as well as some technical questions regarding rates and the method for reconnection in light of changes Flint has made to its system in the interim timeframe.

I will attempt to provide as much clarity as possible through this response. For starters, the rate quoted in my January 12, 2015 letter is related to the current rate year ending June 30, 2015. As new rates are adopted each year, the relative methodology as is applied to current DWSD wholesale customers would also be applied to Flint (and Genesee County) and will impact your rates, accordingly. In other words, rates will change in accordance with DWSD revenue requirements each year that Flint (and Genesee County) receives water from DWSD. That is why my prior letter only quoted a specific rate through June 30, 2015. Our Board of Water Commissioners has not yet adopted rates for the 2015-2016 rate year.

Secondly, you have asked if the rates described in the January 12, 2015 letter are exclusive to Flint or if they also would cover the Genesee County Drain Commissioner ("GCDC"). I certainly envision that the rates associated with Flint would also be available to the GCDC, as the two entities have utilized service pursuant to a single contractual arrangement in the past. To that end, DWSD is open to the possibility for a contract to be entered into by either Flint or GCDC on behalf of both customers, depending on the intricacies of the connections that you referenced with respect to Flint's recent sale of pipeline to GCDC. As noted previously, entering into a contract is not required to reinstitute service to Flint during the current emergency situation, in anticipation of further discussions toward a future service relationship.

Additionally, you have asked about short-term as compared to a long-term contractual relationship in light of Flint and GCDC's combined intent to utilize KWA for long-term service as early as 2016. DWSD operates pursuant to long-term contracts with its customers. As you may be aware, our model contracts are for a period of thirty years.

However, in light of the work already done by Flint and GCDC in preparation to receive raw water from KWA, DWSD is open to exploring a long-term contractual arrangement in which DWSD provides full service to Flint (and GCDC) until such time as KWA is operational, and then a back-up service arrangement, thereafter. The specific terms of that back-up service arrangement would require some further negotiation, but I would assume that such an arrangement would be mutually beneficial in light of the concerns with utilization of the Flint River as a primary or secondary water source.

You have also asked a technical question about the steps necessary in order for Flint to convert back to DWSD for receipt of water service. While I agree that it is not as simple as flipping a switch, I do not believe that this conversion would be a significant obstacle for Flint and GCDC to overcome. In fact, there should not be any actions required of DWSD in order to resume service, since we are currently providing full service to GCDC through the GN-01 meter (formerly the FL-01 meter).

Finally, you have asked if the anticipated assumption of DWSD's wholesale operations by the Great Lakes Water Authority ("GLWA") will impact the proposal that has been made. In short, the answer to your question is that it would not, depending on the timing of the signing of a new contract between the parties. Under the terms of the GLWA Memorandum of Understanding and Articles of Incorporation, it is envisioned that the GLWA would assume all wholesale contracts of DWSD. Therefore, the GLWA would be bound by the contractual terms that are agreed upon between DWSD and the City of Flint and/or GCDC. Nevertheless, as the GLWA Board has now been seated and has a regular schedule of meetings, I would certainly anticipate advising the GLWA Board of the terms of any proposed contract between the parties, and to seek their input or listen to any concerns or suggestions that they might have. In any event, resumption of service in the short term to address Flint's current needs, remains available immediately under existing published rates, and requires no action by either Board.

I look forward to the continued discussions, and hope that there is a viable solution that can be reached for the benefit of all parties.

Sincerely yours,

Sue F. McCormick
Director, Detroit Water and Sewerage Department
Interim CEO, Great Lakes Water Authority

Cc: The Honorable Dayne Walling, Mayor, City of Flint
Gerald Ambrose, Emergency Manager, City of Flint
Flint City Council
The Honorable Michael E. Duggan, Mayor, City of Detroit
Mr. Jim Fausone, Chairman, Board of Water Commissioners
Mr. Robert Daddow, Chairman, Great Lakes Water Authority

From: Daddow, Robert <daddowr@oakgov.com>
Sent: Wednesday, February 25, 2015 5:40 PM
To: Baird, Richard (GOV)
Subject: Flint Article
Attachments: Scanned Document.pdf

Just an article to lighten you day up a bit – Obama has been requested to bail Flint out of their water problems. Fascinating.

From: Daddow, Robert [mailto:daddowr@oakgov.com]
Sent: Wednesday, February 25, 2015 3:36 PM
To: daddowr@oakgov.com
Subject:

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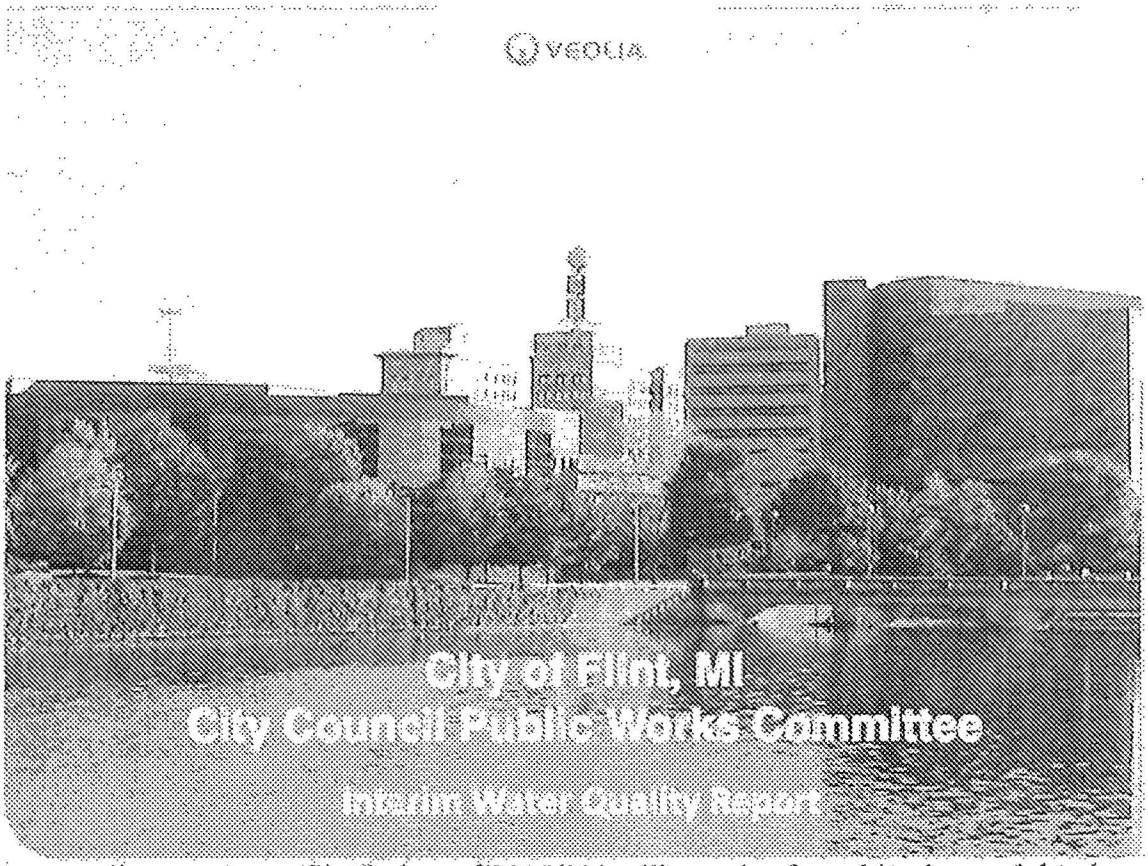
PDF

Flint mayor wants White House to help fi water problems

Fix



In a letter to President Obama's director of intergovernmental affairs Monday, Feb. 23, Mayor Dayne Walling requested that the White House and U.S. Environmental Protection Agency participate in a City of Flint Technical Advisory Water Committee.

(http://media.mlive.com/newsnow_impac-smalljpg-4d71f55e3e65f8c6.jpg)
Dayne Walling

Walling and emergency manager Jerry Ambrose announced last week that they were forming a water advisory committee consisting of about 40 business owners, elected officials and members of various community organizations.

At the same time, the mayor and city manager said a technical advisory committee was also being formed, consisting of people representing health, government, industry, education and scientific research.

Walling's letter to Jerry Abramson, director of intergovernmental affairs for the White House, says Flint residents are "most concerned about the safety and quality of the drinking water that is being treated from the Flint River.

"This is my top priority and work is being done every day to secure drinking water that is 100 percent safe according to the standard.

"I welcome any technical assistance you are able to coordinate, including expertise on water quality and public health, best practices with water treatment and improving distribution system infrastructure," the letter says.

Walling said Monday that he's been working with a U.S. EPA official about the potential for federal assistance with Flint's water system and is hopeful the city can get some help from Washington.

"It's critical that the federal, state and local governments are all on the same page and that we're taking full advantage of everyone's expertise and experience," Walling said. "To date, the federal expertise has not been brought to the table."

Water has become a top issue in the city since customers received notice that Flint was in violation of the Safe Drinking Water Act because of the high level of total trihalomethanes (TTHM) in the water supply in 2014.

Officials have said the most recent testing shows those TTHM levels have dropped to acceptable levels, but customers are still expected to get a second notice of violation next month because levels were so high in 2014.

The city began using the Flint River as its water source in April and officials struggled during the summer to keep bacteria and TTHM, a disinfection byproduct, under control.

om/share)

City residents have also complained about the taste, smell and appearance of their water in recent months -- problems that city officials have said are related to the city's aging water transmission system and hundreds of water main breaks in the last 12 months.

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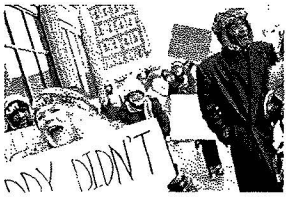

Flint water advisory committee formed by mayor, emergency manager (http://www.mlive.com/news/flint/inde = member_citizen_water_commit.html#inc

Children's Museum stops flow of Flint water at fountains, posts TTHM notices (http://www.mlive.com/news/flint/inde

(http://ads.mlive.com/RealMedia/ads/click_lx.ads/www.mlive.com/news/flint/2015/02/walling_asks_for_white_

From: Daddow, Robert <daddowr@oakgov.com>
Sent: Wednesday, February 25, 2015 6:04 PM
To: Baird, Richard (GOV)
Subject: RE: Flint Article

Cute, but unfortunately too true.

-----Original Message-----
From: Baird, Richard (GOV) [mailto:bairdr@michigan.gov]
Sent: Wednesday, February 25, 2015 5:53 PM
To: Bob Daddow
Subject: Re: Flint Article

Maybe he can help. He's an expert at treading water and going nowhere.

Sent from my Verizon Wireless 4G LTE DROID On Feb 25, 2015 5:39 PM, "Daddow, Robert" <daddowr@oakgov.com> wrote:
Just an article to lighten you day up a bit - Obama has been requested to
bail Flint out of their water problems. Fascinating.

From: Daddow, Robert [mailto:daddowr@oakgov.com]
Sent: Wednesday, February 25, 2015 3:36 PM
To: daddowr@oakgov.com
Subject:

From: Workman, Wayne (TREASURY)
Sent: Thursday, February 26, 2015 8:31 AM
To: Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Baird, Richard (GOV)
Cc: Koryzno, Edward (Treasury); Saxton, Thomas (Treasury)
Subject: Flint Water

Harvey, Wanted to let you know I did get in touch with Jerry Ambrose last night and the City will be working on a side by side comparison of KWA vs DWSD and a simple explanation of the current finances of the water system. Hope the attachments Ed Koryzno sent again are helpful. One was the list of members in the new Water Advisory Committee and the second was the interim report from Veiola. Wayne

From: Darnell Earley <darnell.earley@detroitk12.org>
Sent: Friday, September 25, 2015 5:55 PM
To: Saxton, Thomas (Treasury); Baird, Richard (GOV)
Subject: Fwd: Flint Water Statement-FOR REVIEW

FYI

Sent from my iPhone

Begin forwarded message:

> **From:** Michelle Zdrodowski <michelle.zdrodowski@detroitk12.org>
> **Date:** September 25, 2015 at 5:33:31 PM EDT
> **To:** Darnell Earley <darnell.earley@detroitk12.org>
> **Subject: Re: Flint Water Statement-FOR REVIEW**
>
> Received approval from Gov's Office PR. Sending now.
>
> **Michelle A. Zdrodowski**
>
> Executive Director of Communications
>
> Detroit Public Schools
>
> 3011 W. Grand Boulevard, 14th Floor
>
> Detroit, MI 48202
>
> 313.873.3238, office
>
> [redacted]

From: Michelle Zdrodowski
Sent: Friday, September 25, 2015 5:16 PM
To: Darnell Earley
Subject: Re: Flint Water Statement-FOR REVIEW

OK, with your edit. I will send to Sara and Terry

The decision for Flint to join the Karegnondi Water Authority and to leave the Detroit Water and Sewerage System was made under the authority of previous Flint Emergency Managers prior to my appointment in October 2013. And, while the deal to sell the pipeline had been in process as I assumed my position, it was finalized after thorough review and with the health and well-being of all citizens -- from small children to senior citizens and everyone in between -- taken into consideration. An even bigger concern that we must all be paying attention to is the aging infrastructure and water distribution systems in all of our urban communities -- many of which are more than 100 years old. Where the focus should be placed moving forward is not on what we do in the interim between now and when the new system is complete, but what is done in the long-term to replace the crumbling water distribution system that exits throughout Flint and Genesee County. Iam confident that the city of Flint is following the standards of the State of Michigan's Department of Environmental Quality for safe water compliance, as it should.

Michelle A. Zdrodowski

Executive Director of Communications

Detroit Public Schools

3011 W. Grand Boulevard, 14th Floor

Detroit, MI 48202

313.873.3238, office

[redacted]

From: Darnell Earley
Sent: Friday, September 25, 2015 5:12 PM
To: Michelle Zdrodowski
Subject: Re: Flint Water Statement-FOR REVIEW

Add as the last sentence :

I'm confident that the city of Flint is following the standards of the States department of environmental quality for safe water compliance, as it should.

Work that in then send it to Sara and Terry for their blessing .

Sent from my iPhone

On Sep 25, 2015, at 4:56 PM, Michelle Zdrodowski <michelle.zdrodowski@detroitk12.org> wrote:

> Mr. Earley,
>
> Draft statement for the Freep, based on our discussion, for your review:
>
> The decision for Flint to join the Karegnondi Water Authority and to leave the Detroit Water and Sewerage System was made under the authority of previous Flint Emergency Managers prior to my appointment in October 2013. And, while the deal to sell the pipeline had been in process as I assumed my position, it was finalized after thorough review and with the health and well-being of all citizens -- from small children to senior citizens and everyone in between -- taken into consideration. An even bigger concern that we must all be paying attention to is the aging infrastructure and water distribution systems in all of our urban communities -- many of which are more than 100 years old. Where the focus should be placed moving forward is not on what we do in the interim between now and when the new system is complete, but what is done in the long-term to replace the crumbling water distribution system that exits throughout Flint and Genesee County.
>
> Michelle

Michelle A. Zdrodowski

Executive Director of Communications

Detroit Public Schools

3011 W. Grand Boulevard, 14th Floor

Detroit, MI 48202

313.873.3238, office

[redacted]

From: Brown, Frank <fbrown@generalatlantic.com>
Sent: Wednesday, September 30, 2015 11:24 AM
To: Baird, Richard (GOV)
Subject: Re: Flint water background information
Attachments: image001.jpg; image001.jpg

In process. Will come back to and Harvey when I know more. Am in London. Didn't reach out to Eddie as I think this week is his operation. Have you heard anything?

Frank

Sent from my iPad

On Sep 30, 2015, at 3:34 PM, Baird, Richard (GOV) <bairdr@michigan.gov<mailto:bairdr@michigan.gov>> wrote:

Frank:

We have a situation in Flint, Michigan that is beginning to get national attention and could be an opportunity for Home Depot. 18 months ago, Flint switched its water supply from Detroit Water (the distance and pumping costs of going uphill made it quite expensive) to the Flint River as a temporary answer, until they could finish the construction to get their water from Lake Huron (Karagondi Water System). The corrosive attributes of the River water have exacerbated the lead deposit leaching into homeowner pipes and there is concern around lead poisoning, especially for infants.

The corporate community is rallying to address the problem. Meijer donated 1500 water filters to low income residents and GM is about to announce a donation of between 5,000 and 10,000 filters. I do not yet know where GM is getting the filters from, but I was thinking that Home Depot might want to join the effort with a donation, supply chain discounting assistance, or some combination of activity that could help Flint residents. Harvey Hollins is our point person for this effort, since he is the Director of Urban Initiatives for Governor Snyder. I have copied him here.

If you could get this into the hands of the right people and see if there is interest in speaking with Harvey, I would be very appreciative. Thanks and take care.

Regards,

Rich

From: Murray, David (GOV)
Sent: Wednesday, September 30, 2015 9:35 AM
To: Baird, Richard (GOV)
Subject: Flint water background information

Hi Rich,

These are two documents that I think are helpful addressing the questions about lead and Flint water overall, prepared by DEQ and DHHS. These were intended for internal use, so please ask our partners to not share them beyond the people on their teams making the decisions.

Please let me know if you need anything else.

Dave

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov<mailto:MurrayD1@michigan.gov>
517-335-6397, office
[redacted] mobile
Twitter:@michigandmurray

[Emblem]

<Flint water FAQs (00000004).pdf>
<Sharable Flint Lead TP 092415 (00000002).docx>

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From: Muchmore, Dennis (GOV)
Sent: Friday, October 02, 2015 10:11 AM
To: Saxton, Thomas (Treasury)
Cc: Khouri, Nick (TREASURY); Workman, Wayne (TREASURY); Stanton, Terry A. (Treasury)
Subject: Re: follow up

I think that Bob Daddow, Rich Baird and Mike Duggan have something to do with the more "reasonable" approach. The Mayor in particular is very concerned about the issues of a fellow community and Daddow is perhaps the finest public administrator in the state. So, their involvement and Rich's management skills are powerful forces.

On Oct 1, 2015, at 8:25 PM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov> wrote:

> Dennis - in response to your earlier email; Wayne's guys came up with a ballpark estimate for reconnecting to DWSD. Let me emphasize 'ballpark'. They used your assumptions & they talked to Natasha H. after 5:00. Bottom line... the estimated cost is approx $10.5mm to reconnect until June '16.
>
> These numbers on their surface seem much improved over previous DWSD $offers. [Is Daddow in the loop on this ?] We need to give some more thought as to whether this is all inclusive. e.g., there might be some costs from turning down operations at the plant
>
> I am being told this can happen in a relatively short time i.e., less than a week. Which seems aggressive. Obviously that does not mean the lead concerns nor discolored water, etc goes away in a week. The pipe section they sold to the county won't be an impediment to this deal.
>
> There apparently are no 'upfront' costs we need to worry about. In theory, it seems like it can be paid over the 9-10 months (vs a lump sum). But I am not clear Dennis on those couple ideas/sources the Mayor & Senator mentioned i.e., at this point I am not sure where the $10.5mm comes from.
>
> My guess is we will keep refining this estimate. Let us know if you need anything else. Again, "credit " Wayne's guys for pulling this together quickly.

From: Cline, Richard (Treasury)
Sent: Thursday, October 1, 2015 6:08 PM
To: Saxton, Thomas (Treasury); Koryzno, Edward (Treasury); Byrne, Randall (Treasury)
Subject: RE: follow up

City's usage is 14 MGD/Day

Timeline is 9 months until June 2016

Fixed Cost is $662,100 for 9 months or $5,958,900

Commodity Rate is $501,383/month

Total Monthly Cost is $1,163,483

Cost until June 2016 is $10,471,347

The City does not know the cost to move the water plant into stand-by mode. However, they have indicated that there might be some reduced costs as lower chemical costs will be incurred.

Eric Cline | Department Manager | State of Michigan
Michigan Department of Treasury | Local Government Financial Services Division | Fiscal Responsibility Section
430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
Lansing Office (517) 335-2078 | Cell Phone [redacted] | Traverse City Office (231) 922-5228
E-mail clinerl@michigan.gov

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From: Saxton, Thomas (Treasury)
Sent: Thursday, October 01, 2015 6:01 PM
To: Cline, Richard (Treasury) <clinerl@michigan.gov>; Koryzno, Edward (Treasury) <KoryznoE@michigan.gov>; Byrne, Randall (Treasury) <ByrneR1@michigan.gov>
Subject: follow up
Importance: High

I am getting ready to leave… what have you learned ?

From: Daddow, Robert J <daddowr@oakgov.com>
Sent: Friday, October 02, 2015 3:41 PM
To: Baird, Richard (GOV)
Subject: RE: follow up

I think you are in the ballpark of what DWSD is thinking - just saw the reference in Gongwers on the State assisting. Where is Walling coming up with his repeated $2M / month number given the below?

What can I do to help?

My only concern is not being stuck with an unpaid bill at the end of the 9 month period. Just being the accountant that I am. RJD

-----Original Message-----
From: Baird, Richard (GOV) [mailto:bairdr@michigan.gov]
Sent: Friday, October 02, 2015 10:13 AM
To: Daddow, Robert J
Subject: Fwd: follow up

fyi

Sent from my iPad

Begin forwarded message:

From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov<mailto:muchmored@michigan.gov>>
Date: October 2, 2015 at 10:10:36 AM EDT
To: "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov<mailto:SaxtonT@michigan.gov>>
Cc: "Khouri, Nick (TREASURY)" <KhouriN@michigan.gov<mailto:KhouriN@michigan.gov>>, "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov<mailto:WorkmanW@michigan.gov>>, "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov<mailto:StantonT@michigan.gov>>
Subject: Re: follow up

I think that Bob Daddow, Rich Baird and Mike Duggan have something to do with the more "reasonable" approach. The Mayor in particular is very concerned about the issues of a fellow community and Daddow is perhaps the finest public administrator in the state. So, their involvement and Rich's management skills are powerful forces.

On Oct 1, 2015, at 8:25 PM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov<mailto:SaxtonT@michigan.gov>> wrote:

Dennis - in response to your earlier email; Wayne's guys came up with a ballpark estimate for reconnecting to DWSD. Let me emphasize 'ballpark'. They used your assumptions & they talked to Natasha H. after 5:00. Bottom line... the estimated cost is approx $10.5mm to reconnect until June '16.

These numbers on their surface seem much improved over previous DWSD $offers. [Is Daddow in the loop on this ?] We need to give some more thought as to whether this is all inclusive. e.g., there might be some costs from turning down operations at the plant

I am being told this can happen in a relatively short time i.e., less than a week. Which seems aggressive. Obviously that does not mean the lead concerns nor discolored water, etc goes away in a week. The pipe section they sold to the county won't be an impediment to this deal.

There apparently are no 'upfront' costs we need to worry about. In theory, it seems like it can be paid over the 9-10 months (vs a lump sum). But I am not clear Dennis on those couple ideas/sources the Mayor & Senator mentioned i.e., at this point I am not sure where the $10.5mm comes from.

My guess is we will keep refining this estimate. Let us know if you need anything else. Again, "credit " Wayne's guys for pulling this together quickly.

From: Cline, Richard (Treasury)
Sent: Thursday, October 1, 2015 6:08 PM
To: Saxton, Thomas (Treasury); Koryzno, Edward (Treasury); Byrne, Randall (Treasury)
Subject: RE: follow up

City's usage is 14 MGD/Day

Timeline is 9 months until June 2016

Fixed Cost is $662,100 for 9 months or $5,958,900

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Eric Cline | Department Manager | State of Michigan

Michigan Department of Treasury | Local Government Financial Services Division | Fiscal Responsibility Section

430 W. Allegan Street, 3rd Floor | Lansing, MI 48922

Lansing Office (517) 335-2078 | Cell Phone [redacted] | Traverse City Office (231) 922-5228

E-mail cliner1@michigan.gov

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From: Saxton, Thomas (Treasury)
Sent: Thursday, October 01, 2015 6:01 PM
To: Cline, Richard (Treasury) <cliner1@michigan.gov<mailto:cliner1@michigan.gov>>; Koryzno, Edward (Treasury) <KoryznoE@michigan.gov<mailto:KoryznoE@michigan.gov>>; Byrne, Randall (Treasury) <ByrneR1@michigan.gov<mailto:ByrneR1@michigan.gov>>
Subject: follow up
Importance: High

I am getting ready to leave... what have you learned ?

From: Brown, Frank <fbrown@generalatlantic.com>
Sent: Saturday, October 03, 2015 9:50 AM
To: Baird, Richard (GOV); [redacted]
Subject: Fwd: Flint water background information
Attachments: Attachment-1.jpeg

Hi. Hope this was helpful. Have a good weekend.

Frank

Sent from my iPad

Begin forwarded message:

From: <Craig_Menear@HomeDepot.com<mailto:Craig_Menear@homedepot.com>>
Date: October 3, 2015 at 9:40:29 AM EDT
To: <fbrown@generalatlantic.com<mailto:fbrown@generalatlantic.com>>,
<carol_tome@homedepot.com<mailto:carol_tome@homedepot.com>>,
<Tim_Crow@homedepot.com<mailto:Tim_Crow@homedepot.com>>
Subject: RE: Flint water background information

Frank: Just wanted to circle back on the action taken by the Home Depot Team. Our team connected with Richard Baird and received direction on the greatest need. As a result, we took the following action;

1. Donated 10 pallets of water for the Flint schools 2. Donated 8 pallets for the police and fire departments (we believe they will distribute to families) 3. We facilitated the purchase of water filters by the Red Cross ($80,000) with our supplier

In addition we are lowering our pricing on water and filters in the market to assist customers with purchase. Our district manager also conducted a training session on how to install/use the filters which will be shared with residents.

We will stay in contact with Rich and the Mayor's office if additional needs arise.

Craig

-----Original Message-----
From: Brown, Frank [mailto:fbrown@generalatlantic.com]
Sent: Wednesday, September 30, 2015 10:48 AM
To: Menear, Craig A; Tome, Carol; Crow, Tim
Subject: Fwd: Flint water background information

Hi all. See below. My friend Rich is chief of staff for Governor Snyder. If we are interested in trying to help with this problem, please let me know and I will make the connection. Thanks a lot.

Frank

Sent from my iPad

Begin forwarded message:

From: "Baird, Richard (GOV)" <bairdr@michigan.gov<mailto:bairdr@michigan.gov><mailto:bairdr@michigan.gov>>
Date: September 30, 2015 at 3:34:15 PM GMT+1
To: "Frank Brown
(fbrown@generalatlantic.com<mailto:fbrown@generalatlantic.com><mailto:fbrown@generalatlantic.com>)"
<fbrown@generalatlantic.com<mailto:fbrown@generalatlantic.com><mailto:fbrown@generalatlantic.com>>
Cc: "Hollins, Harvey (GOV)" <hollinsh@michigan.gov<mailto:hollinsh@michigan.gov><mailto:hollinsh@michigan.gov>>
Subject: FW: Flint water background information

Frank:

We have a situation in Flint, Michigan that is beginning to get national attention and could be an opportunity for Home Depot. 18 months ago, Flint switched its water supply from Detroit Water (the distance and pumping costs of going uphill made it quite expensive) to the Flint River as a temporary answer, until they could finish the construction to get their water from Lake Huron (Karagondi Water System). The corrosive attributes of the River water have exacerbated the lead deposit leaching into homeowner pipes and there is concern around lead poisoning, especially for infants.

The corporate community is rallying to address the problem. Meijer donated 1500 water filters to low income residents and GM is about to announce a donation of between 5,000 and 10,000 filters. I do not yet know where GM is getting the filters from, but I was thinking that Home Depot might want to join the effort with a donation, supply chain discounting assistance, or some combination of activity that could help Flint residents. Harvey Hollins is our point person for this effort, since he is the Director of Urban Initiatives for Governor Snyder. I have copied him here.

If you could get this into the hands of the right people and see if there is interest in speaking with Harvey, I would be very appreciative. Thanks and take care.

Regards,

Rich

From: Murray, David (GOV)
Sent: Wednesday, September 30, 2015 9:35 AM
To: Baird, Richard (GOV)
Subject: Flint water background information

Hi Rich,

These are two documents that I think are helpful addressing the questions about lead and Flint water overall, prepared by DEQ and DHHS. These were intended for internal use, so please ask our partners to not share them beyond the people on their teams making the decisions.

Please let me know if you need anything else.

Dave

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov<mailto:MurrayD1@michigan.gov><mailto:MurrayD1@michigan.gov>
517-335-6397, office
[redacted]
Twitter:@michigandmurray

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[cid:A2F234B4-A10A-4824-B5B1-1ED79504A765]

PARK HERE

From: Darnell Earley <darnell.earley@detroitk12.org>
Sent: Tuesday, October 13, 2015 4:15 PM
To: Baird, Richard (GOV)
Subject: Re: flint docs

Thanks for your help and your support Rich.

Sent from my iPhone

On Oct 12, 2015, at 5:01 PM, Baird, Richard (GOV) <bairdr@michigan.gov> wrote:

From: Workman, Wayne (TREASURY)
Sent: Wednesday, October 07, 2015 4:25 PM
To: Hollins, Harvey (GOV)
Cc: Muchmore, Dennis (GOV); Stanton, Terry A. (Treasury); Saxton, Thomas (Treasury); Wurfel, Sara (GOV); Wurfel, Brad (DEQ); Baird, Richard (GOV)
Subject: FW: flint docs

Harvey, Attached are various documents and press reports of the City Council's vote in March 2013 to join KWA. We have not located the actual resolution and it is not on the City's website. It is interesting that the only no vote explained he wanted to just use Flint River water. Wayne

Wayne L. Workman
Deputy State Treasurer
Michigan Department of Treasury

From: Dempkowski, Angela (Treasury)
Sent: Wednesday, October 07, 2015 4:20 PM
To: Workman, Wayne (TREASURY) <WorkmanW@michigan.gov>
Subject: flint docs

Revised pdf

Angela Dempkowski | Senior Executive Management Assistant/Treasury
State of Michigan | 430 W. Allegan Street, 1st Floor | Lansing, MI 48922
(517) 373-4415 | (517) 373-0633 (fax)
dempkowskia@michigan.gov

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Thank you

<Flint.pdf>

From: Scott, Allison (GOV)
Sent: Tuesday, October 20, 2015 5:08 PM
To: Baird, Richard (GOV)
Subject: FW: tomorrow morning

Here you go

From: Bedan, Morgan (GOV)
Sent: Tuesday, October 20, 2015 5:06 PM
To: Scott, Allison (GOV) <scotta12@michigan.gov>
Subject: RE: tomorrow morning

Will have RH host

[redacted]

From: Scott, Allison (GOV)
Sent: Tuesday, October 20, 2015 5:05 PM
To: Bedan, Morgan (GOV) <BedanM@michigan.gov>
Subject: tomorrow morning

Need a dial in for the 9 am flint meeting please send to me when available.

From: Davis, Matthew (Matt) <[redacted]>
Sent: Tuesday, October 20, 2015 8:41 PM
To: Baird, Richard (GOV)
Subject: Re: After Action Panel Meeting with Governor Snyder CORRECTION

Hi Rich -

I look forward to meeting you tomorrow morning at the meeting with Governor Snyder. I saw Nick Lyon this afternoon at another meeting and he told me that he will be there as well.

I am writing to advise you that my consulting rate for this role on the after-action panel will be $150/hour, plus expenses. I am basing this on my usual rate for consulting on projects for the National Institutes of Health, and upon checking with colleagues in policy familiar with circumstances such as these. Please let me know if you have any questions or concerns about this matter.

I assume that the bio information I sent was acceptable? Let me know if you need more or less.

Regards,
Matt

On 10/19/15, 10:44 AM, "Baird, Richard (GOV)" <bairdr@michigan.gov> wrote:

>I apologize. The time would be 9am to 10am.
>
>Sent from my Verizon Wireless 4G LTE DROID On Oct 19, 2015 10:38 AM,
>"Baird, Richard (GOV)" <bairdr@michigan.gov>
>wrote:
>Gentlemen:
>
>Thank you for agreeing to serve on this special group to assess the
>Flint water situation and develop recommendations so that this
>situation does not recur. Governor Snyder would like to meet with you
>all at his office in Lansing (2nd Floor Romney, 111 S. Capitol Ave.)
>from 10am to 11am on Wednesday, October 21st. I have cc'd Beth Emmitt,
>Head of Scheduling who is holding the time pursuant to your
>confirmation. It would be our intent to announce the formation of this
>group Wednesday afternoon or Thursday latest.
>
>Regards,
>
>Rich
>
>

****
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From: Hansen, Rachel (GOV)
Sent: Wednesday, October 21, 2015 9:04 AM
To: '[redacted]'
Cc: Baird, Richard (GOV)
Subject: dial-in information for call right now

[redacted]

For Flint call with the Governor from 9-10

Sincerely,

Rachel Hansen
Administrative Assistant to the Governor
Office of Governor Rick Snyder
517-373-2340
Hansenr3@michigan.gov

From: Anderson, Madhu (DEQ)
Sent: Wednesday, October 21, 2015 1:38 PM
To: Baird, Richard (GOV)
Cc: Wyant, Dan (DEQ); Lyon, Nick (DHHS); VanSickle, Michele (GOV); Murray, David (GOV)
Subject: Draft Scope - for member review
Attachments: Flint Water Task Force.draftscope.211015.docx

Rich - The Flint Water Task Force members asked for a draft scope prior to the announcement being made this afternoon. Hopefully, I captured their intent in the attached document. Could you forward this document to the members after you have had a chance to review?

Thanks,

Madhu R. Anderson
Deputy Director, Economic & Strategic Initiatives
☎ 517 284 6702 | [redacted]
✉ andersonm30@michigan.gov
DEQ

(DRAFT)
FLINT WATER ADVISORY TASK FORCE
AFTER-ACTION REVIEW

The Flint Water Task Force is an independent advisory panel appointed by Governor Rick Snyder charged with reviewing actions regarding water use and testing in Flint and with offering recommendations for future guidelines to protect the health and safety of all state residents.

The task force expects to summarize its work in a report to be presented to Governor Rick Snyder within ninety (90) days.

GOALS

The Flint Water Task Force's goals are as follows:

- Complete a thorough review of all steps taken by state and local officials regarding the decision to switch the City of Flint's water source to the Flint River from the Detroit Water and Sewerage Department's system (DWSD).
  - Produce a timeline of actions
  - Establish why each action was taken

- Review the roles of the federal, state, and local officials in the decision-making process
  - Identify best practices for federal, state, and local officials to work together in future similar situations
  - Evaluate where coordination between these entities could have been better, and how it could be improved

- Review federal, state, and local actions and protocols
  - Determine whether the proper procedures were followed
  - Identify which procedures should be changed

- Monitor and review the process, procedures, and protocols being followed as the City of Flint returns to the DWSD system
  - Ensure that proper corrosion controls and testing are in place
  - Highlight the appropriate actions that the City of Flint should follow when the future switch is made to the Karegnondi Water Authority's system

- Assess future practices
  - Highlight practices that should change for communities in similar situations
  - Recommend changes in law, procedure, or practice to ensure all Michiganders are drinking safe water

From: Anderson, Madhu (DEQ)
Sent: Thursday, October 22, 2015 4:47 PM
To: Davis, Matthew (Matt); erothste@grg-ltd.com; Ken Sikkema; Chris Kolb; reynolds@mottchc.org
Cc: VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: Task Force - Email 1: General Background
Attachments: Flint Water Backgrounder.docx; Draft Flint Drinking Water Events Timeline.docx; FlintWater_ActionPlan_100115_501844_7.pdf; 3rd Quarter CoF Water Quality Report (2).pdf

All – Per your request, in the next 7 emails, you will receive materials (by general category) that should give you some background on the issues that you will be addressing for the Flint Water Task Force. I have divided them into 7 emails to help you manage the subject matter.

Email 1: General Background includes a timeline, backgrounder, Action Plan, and the City of Flint's 3rd quarter water quality report. You may also find a significant amount of material online from various sources.

Madhu

From: Davis, Matthew (Matt) [mailto:[redacted]]
Sent: Thursday, October 22, 2015 10:49 AM
To: Anderson, Madhu (DEQ); Ken Sikkema
Cc: Chris Kolb; erothste@grg-ltd.com; reynolds@mottchc.org; VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: RE: Roster of Task Force and Supporting Cast

Madhu – thanks on behalf of all of us.
We especially appreciate the ability to share electronically so that we can review in a more timely fashion.
Matt

From: Anderson, Madhu (DEQ) [mailto:AndersonM30@michigan.gov]
Sent: Thursday, October 22, 2015 9:42 AM
To: Ken Sikkema
Cc: Chris Kolb; Davis, Matthew (Matt); erothste@grg-ltd.com; reynolds@mottchc.org; VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: RE: Roster of Task Force and Supporting Cast

All - FYI… I should have a set of 'briefing' materials this afternoon as requested. We will be able to send much of it electronically, and provide links to materials available online.

Madhu

From: Ken Sikkema [mailto:ksikkema@pscinc.com]
Sent: Thursday, October 22, 2015 9:35 AM
To: Baird, Richard (GOV)
Cc: Chris Kolb; [redacted]; erothste@grg-ltd.com; reynolds@mottchc.org; Anderson, Madhu (DEQ);

VanSickle, Michele (GOV)
Subject: Re: Roster of Task Force and Supporting Cast

good...thank you

Ken

On Thu, Oct 22, 2015 at 9:31 AM, Baird, Richard (GOV) <bairdr@michigan.gov> wrote:

Ken and Team:

I asked my assistant Michele to put this together so that everyone's contact information could be found in a single place.

Regards,

Rich

--

Ken Sikkema
Senior Policy Fellow
Public Sector Consultants
PH: 517-484-4954
ksikkema@pscinc.com

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Electronic Mail is not secure, may not be read every day, and should not be used for urgent or sensitive issues

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

Backgrounder on City of Flint Water

After a change in the water source for Flint residents, there have been concerns related to the water quality, in particular lead in the water, and its impact of the community. As a result, Department of Health and Human Services (DHHS) and the Department of Environmental Quality (DEQ), working with local public health departments and the City of Flint (City), have put together an Action Plan to address public health concerns in the City.

While Flint water is meeting all state and federal drinking water standards, there is an increasing level of concern that the Flint River is not the best water source. The City's Technical Advisory Committee recommended the City switch back to DWSD. In addition, recent studies by Hurley Children's Hospital, and confirmed by DHHS, have indicated a rise in blood lead levels in some Flint children. Sample screening completed last week by the DEQ indicated that some Flint Public Schools have detectable lead levels in their water.

Action Plan:
Immediately, the City and State announced the following steps:

- Governor named Dr. Eden Wells as Flint Public Health Advisor
- Advisories issued recommending residents flush their cold water pipes before use, as well as only use water from the cold water tap for drinking, cooking and especially making baby formula.
- Schools are advised to not use the drinking water fountains and are using bottled water.
- Free filters are available to all households in Flint, along with replacement filters.
- Flint Public Schools were screened for lead exposure.

For the near term, the City and State are asking for/ doing the following:

- Switch the drinking water source from the Flint River to DWSD.
- Test and inspect all schools in Flint, including charter and parochial schools.
- Free water testing for all homes.
- Expand exposure testing to additional households in Flint.

For the long term health of all Flint residents, the City and State have committed to:

- Switching to the Karegnondi Water Authority in the summer of 2016 as the permanent water supply for the City of Flint
- Allow for Drinking Water Revolving Loan funds to be used to expedite the replacement of private residential lead service lines.
- Lead exposure campaigns for homes, schools and communities.

Budget Request:
To facilitate the action plan outlined above, the State is requesting $10.6 million ($8.2 million GF). The funding will address 4 priority areas:

1. Provision of filters for residential service ($2,016,000)

Filters will be provided to all Flint households, including replacement filters until the system is fully optimized. Each filter cost is $20.

2. 50% of the estimated cost to reconnect temporarily to the DWSD ($6,000,000)

The City has estimated it will cost an additional $1.3 million per month to use DWSD instead of the Flint River. The State and City have agreed to split the cost through July 2016 when the new Karegnondi Water Authority will be completed and Flint will switch to that water source.

3. Funding for testing water samples ($1,000,000)

New testing protocols for schools will require each faucet in the school be tested and evaluated at the State's lab. In addition, lead exposure testing in homes will result in thousands of additional samples that will need to be evaluated. Each sample cost $26 to process.

4. Lead exposure testing and inspections ($1,600,000)

DHHS, DEQ and LARA are pulling together a team to go into schools and high risk homes to test and evaluate lead exposure.

Flint Drinking Water Events Timeline

- Pre-1967 Flint Water Treatment Plant in operation using Flint River
- Post-1967 Flint switched to DWSD for drinking water
- Mid-2000s Discussions began regarding Karegnondi Water Authority
- April 2013 Flint notifies DWSD of contract discontinuation and joins the Karegnondi Water Authority
- April 2013 DWSD sets termination of Flint water service contract to April 17, 2014
- June 2013 Karegnondi Water Authority groundbreaking
- June 2013 Flint notifies DEQ of intent to use of Flint Water Treatment Plant full time with Flint Water
- May 2014 Flint stops purchasing DWSD water. Starts using the City of Flint WTP and Flint River
- Aug 2014 Flint E.Coli Bacteria violation, Partial System Boil Water Advisory
- Aug 2014 Disinfection Byproducts, DEQ requests preemptive Operational Evaluation
- Sept 2014 Flint Total Coliform Bacteria violation, Partial System Boil Water Advisory
- Oct 2014 General Motors announces decision to stop using Flint water
- Nov 2014 Disinfection Byproducts violation begins
- Jan 2015 1st 6-month lead and copper sampling completed 100 samples, 90th% = 6 ppb
- July 2015 2nd 6-month lead and copper sampling completed 69 samples, 90th% = 11 ppb
- Aug 2015 Disinfection Byproducts return to compliance
- Aug 2015 Flint required by DEQ to recommend and install Optimized Corrosion Control Treatment
- Sept 24, 2015 Hurley Children's Hospital data reveals high lead levels in Flint children
- October 8, 2015 State screening results show elevated lead levels in Flint schools

- October 15, 2015 State Legislature authorizes a $9 million to assist the City of Flint to pay for the return to the Detroit water system and to fund staff at schools to gauge lead exposure

- October 16, 2015 First weekly coordination meeting held with the City of Flint and state agencies

- October 16, 2015 DEQ meets with Flint Schools Superintendent and Genesee County Health Department

- October 16, 2015 Flint switches back to DWSD for water

- October 21, 2015 Governor Snyder announces formation of Flint Water Task Force to complete an After-Action Review

- July 2016 Planned connection to Karegnondi Water Authority (Lake Huron water to Flint WTP)

TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- The Action Plan -

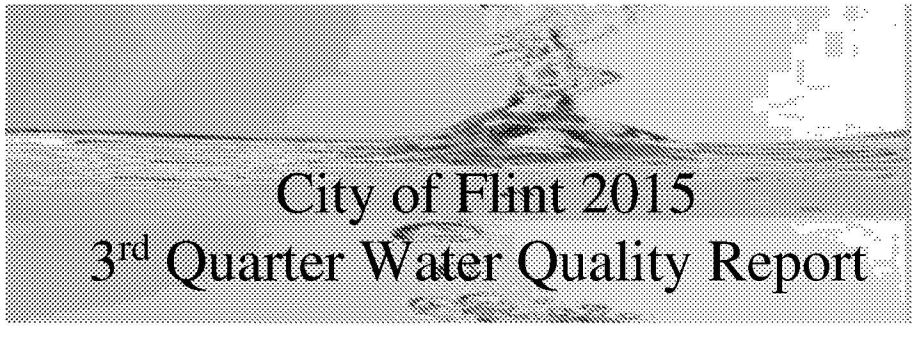
- Testing in Flint public schools immediately to ensure that **drinking water is safe**, with testing also available at no cost to any other school in Flint.
- **Offering free water testing** to Flint residents to assure their drinking water is safe.
- **Providing free water filters** to residents with concerns or who are included in state assistance programs.
- **Expanding health exposure testing** of individual homes.
- **Accelerating corrosion controls** in the Flint drinking water system.
- **Accelerating water system improvements** to address replacing lead service lines.
- Expediting the completion of the **Karegnondi Water Authority** pipeline.
- **Expanding a Safe Drinking Water Technical Advisory Committee** to ensure the best technology, practices and science are being followed by adding an expert from the Environmental Protection Agency's Office of Research and Development to the group.
- Naming Dr. Eden Wells, chief medical executive for the Michigan Department of Health and Human Services, as the **Flint drinking water public health adviser**.
- Boosting a **comprehensive lead education program** to make sure residents have detailed information about how to protect themselves and their homes.

To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit www.mi.gov/FlintWater for more information

Customer Service Center
City Hall
1101 S. Saginaw St.
Flint, MI 48501

Postage



The Quarterly Water Quality Report provides important information about your drinking water. This report includes information about the water source, current drinking water issues, lead information, water filters, 3rd quarter work accomplished, and a water timeline of events. The City of Flint Department of Utilities is dedicated to providing quality drinking water to the residents of the community. The Flint Water Plant operates and maintains a certified drinking water laboratory to assure compliance with all state and federal regulations, and is committed to prompt and thorough notification to the consumers if there is any reason for concern about the quality of the drinking water. Information about your drinking water is available on the City of Flint web page at www.cityofflint.com or by calling the City of Flint Water Plant at **(810) 787-6537**. The Safe Drinking Water Hotline at **(800) 426-4791** is a resource for health related questions and water quality issues. General drinking water information can also be found on the U.S. Environmental Protection Agency (EPA) web site at www.epa.gov/safewater/.

Water Source

The City of Flint began using the Flint River as a water source in May of 2014. After 16 months of treating water from the Flint River, the City became aware that the level of corrosiveness found in Flint River water could result in more lead leaching from service lines and household plumbing. Reports of elevated blood lead levels in children and expert analysis resulted in the City's Technical Advisory Committee making a recommendation to return to the previous source of water while waiting for the KWA to provide water from Lake Huron.

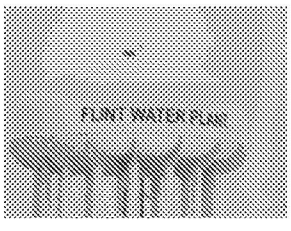
On Friday October 16th, 2015, with the consent of Governor Snyder, the City returned to Detroit as the primary source of drinking water. The decision, along with the Technical Advisory Committee's recommendation followed two consecutive lead and copper test periods that exceeded 5ug/L which calls for additional action. In addition to the switch, the City has submitted a final corrosion control design to the DEQ for comments and approval. The City has requested to use the corrosion control as an additive to treated water it will be required when the city begins treating raw water from the Karegnondi Water Authority which is anticipated to begin in the summer of 2016.

In order to make the transition possible, the City contributed $2 Million dollars, the Mott Foundation contributed $4 Million dollars, and the State of Michigan contributed $ 6 Million dollars.

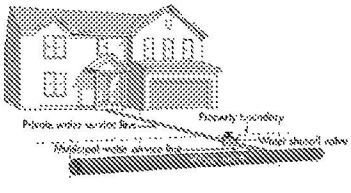
Current Drinking Water Issues & Lead Information

There has been a heightened awareness of lead leaching into drinking water through service lines and household plumbing. The City's Technical Advisory Committee has enlisted the support of EPA lead experts and is working with State of Michigan representatives to increase testing, rebuild public confidence, and implement long-term solutions to lead. It is recommended that everyone get their water tested, obtain a water filter, and check with a plumber to evaluate the type and condition of your household plumbing. The City is currently mapping all of its lead service lines and working to develop a program to get lines changed over time.

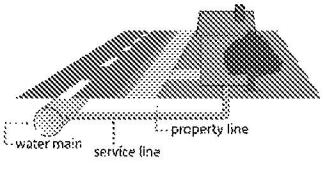
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Flint is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 5 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.



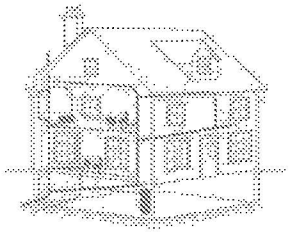
No lead in water leaving the Treatment Plant.



Little or no lead in water in the transmission mains.



Lead can leach into water through service lines.



Lead can leach into water through household plumbing.

Water Filters & Testing

Free water filters have been made available to current Flint residents at several locations. The MDHHS and the Genesee County Community Action Resource Department (GCCARD) are providing Free National Sanitation Foundation certified water filters at the following locations.

Residents receiving MDHHS assistance are encouraged to visit either the **125 E. Union St.** or **4809 Clio Rd. MDHHS** office location to obtain a free, certified home water filter. Residents who are not currently enrolled in MDHHS assistance programs should visit the (GCCARD) offices located at **2727 Lippincott** and **601 N. Saginaw** in Flint.

Staff will be onsite at all four locations from **9 a.m. to 4 p.m., Monday through Friday**, to distribute filters and assist residents who have questions about proper installation.

If you want more information on obtaining a water filter, please call 211.

Other suggestions related to water safety and testing:

- We recommend that everyone get their water tested. Call us at (810)-787-6537.
- Contact the Health Department about having your child's blood tested (810)-257-3612.
- It is advisable to have a plumber check your household plumbing.
- Check your faucet aerator (large lead solder particles can occasionally get lodged in here).

Temporary issues to be aware of when Changing Water Sources

Changing water sources back to Detroit will not fully eliminate the lead concerns. The potential for lead to leach off of certain water service lines or household plumbing will continue to exist regardless of the water source. The City is committed to increased testing, better communication, and developing a lead service line map to identify all of the City owned lead service lines.
As the city changes water sources you can expect the following:

- It could take up to three weeks for the switch in water source to reach all taps in the City.
- Over the next several weeks, we will be winterizing our hydrants which will result in discoloration of the water but will also help accelerate the water flowing through the system.
- Lead will continue to leach off of certain service lines and household plumbing.
- Main breaks could result as a change in source water occurs.
- Water could have discoloration or cloudiness, if this happens, run your faucet until the water clears, if this lasts longer than 20 minutes please report it to our water service center at (810)-766-7202.

Water Timeline

A timeline of events, beginning with signing the KWA contract leading up to the current status of switching back to our previous source of water is available on the City website and can be found by visiting the "water" page located under "residents". Please email flintwater@cityofflint.com with your questions or to request a water test or, call the Water Plant at (810)-787-6537.

3rd Quarter Events

July

- Completed the evaluation of over 8000 valves in the system and identified over 2300 that are currently inoperable. The repair of these valves will be budgeted and worked into our multi-year Capital Improvement Plan.

August

- Successfully completed the installation of Granulated Activated Carbon at the water treatment plant which reduced the TTHM level in the water and helped bring the City back into compliance with the Safe Drinking Water Act.

September

- Leak Detection on all 600 miles of the distribution system has started and is over halfway complete. Several dozen leaks have been identified and repairs continue as more leaks are found. This has decreased the amount of water loss existing in the system.
- Construction of a load out facility at our wastewater plant is on target for completion by November and will allow the City to eliminate the use of the incinerator resulting in significant annual savings.
- Over 3500 new water meters have been installed this year creating better accuracy, accountability, and decreasing the number of estimated reads on water & sewer bills.

Contact Information

Water Treatment Plant - (810)-787-6537
Request a water test.
Request a tour of the Plant.
Ask questions about water quality.

Water Service Center - (810)-766-7202
Report a water leak or other system issues.

Water Pollution Control - (810)-766-7210
Inquiries related to wastewater treatment.
Inquiries related to converting methane gas into energy.

Customer Service – (810)-766-7015
Questions about your water & sewer bill.

Water Filters – 211
Questions about water filters.

2015 3rd Quarter Regulated Detected Contaminants – **Flint River as Source**

Inorganic & Organic Chemicals, Metals, and Pesticides – Monitored at treatment plant						
Regulated Contaminant	Unit of Measure	MCLG	MCL	Highest Level Detected	Range of Detection	Violation
Inorganic Chemicals						
Fluoride	mg/L	4	4	0.84	0.64 – 0.84	No
Nitrate	mg/L	10	10	N.D.	N/A	No
Metals						
Barium	mg/L	2	2	0.02	N/A	No

More than 100 other chemicals were monitored from July through September that were not detected.

The various classification groups of these chemicals include metals, carbamates, herbicides, pesticides, organics, and radiologicals.

Total Organic Carbon, TOC - Monitored at treatment plant			
Regulated Contaminant	Required Monthly % Removal	Minimum Monthly % Removal	Monthly % Removal Ranges
Total Organic Carbon	50	60	60 - 87

Turbidity - Monitored at treatment plant		
Highest Single Measurement (Cannot exceed 1NTU)	Lowest Monthly % of Samples Meeting Turbidity Limit (0.3 NTU in 95% of samples)	Violation
0.18	100 %	No

Disinfectant Residuals – Monitored in the distribution system						
Regulated Contaminant	Unit of Measure	MCLG	MCL	Highest Level Detected	Range of Detection	Violation
Total Chlorine Residual	mg/L	4.0	4.0	4.0	0.2 – 4.0	No

Microbiological Contaminants - Monitored in the distribution system				
Regulated Contaminant	MCLG	MCL	Highest Number detected (in 1 month)	Violation
Total Coliform bacteria	0	The presence of coliform bacteria in > 5% of monthly samples	1	No
E. coli Bacteria	0	0	0	No

Lead & Copper – Monitored from consumers tap					
Regulated Contaminant	Unit of Measure	MCLG	Action Level AL	Number of samples over AL	Total # of Samples Tested from January - September
Lead	ug/L	0	15	16	189
Copper	mg/L	1.3	1.3	0	189

Disinfection By-Products - Monitored in the distribution system and from treatment plant						
Regulated Contaminant	Unit of Measure	MCLG	MCL	Highest Level Detected	Range of Detection	Violation
Total Trihalomethanes (TTHM)	ug/L	n/a	80	90.3	42.6 – 90.3	N/A*
Haloacetic Acids (HAA)	ug/L	n/a	60	15.0	2.0 – 15.0	N/A*
Bromate	ug/L	10	10	N.D.	N/A	N/A*

*Violation based on locational running annual average for TTHM & HAA5, violation for bromate based on yearly average.

Key to the Detected Contaminant Tables		
Symbol	**Abbreviation for**	**Definition/Explanation**
>	Greater than	
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichoroacetic, and trichloroacetic acids. Compliance is based on the total .
LRAA	Locational Running Annual Average	
MCL	Maximum Contaminant Level	The highest level of a contaminant that is allowed in water. MCLs are set as close to the MCLG's as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health.
mg/L	Milligrams per Liter	A milligram = 1/1000 gram 1 milligram per liter is equal to 1ppm
MRDL	Maximum Residual Disinfectant Level	The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRLDG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
n/a	Not Applicable	
ND	Not Detected	
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
pCi/L	Picocuries per Liter	A measure of radioactivity. Picocurie (pCi) means the quantity of radioactive material producing 2.22 nuclear transformations per minute.
ppb	Parts Per Billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.
ppm	Parts Per Million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
RAA	Running Annual Average	
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromoochloromethane and bromoform. Compliance is based on total.
ug/L	Micrograms per Liter	A microgram = 1/1,000,000 gram 1 microgram per liter is equal to 1ppb

From: Anderson, Madhu (DEQ)
Sent: Thursday, October 22, 2015 4:52 PM
To: Davis, Matthew (Matt); erothste@grg-ltd.com; Ken Sikkema; Chris Kolb; reynolds@mottchc.org
Cc: VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: RE: Task Force - Email 2: Press Clips and Releases
Attachments: Governor 21Oct15 Press Release.docx; Press Clips - Week of 101215 Flint Water E-Clips.pdf; Press Clips -Week of 100515 Flint Water E-Clips.pdf

All -- These attachments contain the press clips from the last two weeks (excluding this week's clips) plus a copy of the release announcing the task force.

Madhu R. Anderson
Deputy Director, Economic & Strategic Initiatives
☎ 517 284 6702 | [redacted]
✉ andersonm30@michigan.gov
DEQ

From: GOV Newsroom [mailto:govnewsroom@govsubscriptions.michigan.gov]
Sent: Wednesday, October 21, 2015 2:07 PM
To: VanSickle, Michele (GOV) <vansicklem2@michigan.gov>
Subject: NEWS RELEASE: Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Governor Rick Snyder
REINVENTING MICHI
Getting It Right. Getting It Done.

News Release

Contacts: Sara Wurfel or Dave Murray
517-335-6397

FOR IMMEDIATE RELEASE
Wednesday, Oct. 21, 2015

Gov. Rick Snyder announces Flint Water Task Force to review state, federal and municipal actions, offer recommendations

Experts in public health, water management, environmental protection to focus on steps to protect residents

LANSING, Mich. – Gov. Rick Snyder today announced the creation of an independent advisory task force charged with reviewing actions regarding water use and testing in Flint and offer recommendations for future guidelines to protect the health and safety of all state residents.

Task force members include experts in public health and medicine, water management, and environmental protection from both sides of the aisle, and will be co-chaired by Ken Sikkema of Public Sector Consultants and Chris Kolb, of the Michigan Environmental Council. Also serving will be Dr. Matthew Davis of the University of Michigan Health System, Eric Rothstein, of the Galardi Rothstein Group and Dr. Lawrence Reynolds of Mott Children's Health Center in Flint.

"Transitioning back to the Detroit Water and Sewerage Department-Great Lakes Water Authority is a good first step to protecting public health in Flint, but it's not the last step," Snyder said. "Bringing in outside experts to evaluate our actions and help monitor and advise on potential changes to law, procedures and practices will be key to continuing work on the comprehensive action plan and ensuring safe drinking water for all the residents in Flint and all of Michigan."

Snyder said the administration will fully cooperate with task force members, saying he wants an unbiased report focusing on steps taken in the past and recommendations that could improve practices to ensure all residents have access to safe, clean water.

Ken Sikkema is a senior policy fellow at Public Sector Consultants, where he specializes in public finance, environment, and energy policy. Prior to joining the firm, Sikkema served in both the Michigan House and Senate, culminating with four years as Senate majority leader. He has also served as both an adjunct and visiting professor at Grand Valley State University.

Chris Kolb is president of the Michigan Environmental Council, a statewide coalition of 70 environmental, public health and faith-based nonprofit groups. Before joining the MEC, Kolb represented Ann Arbor in the state House for six years and served six years on the Ann Arbor City Council. He has been president of the MEC for six years.

Matthew Davis, M.D., M.A.P.P., is professor of pediatrics and internal medicine at the University of Michigan Health System and professor of public policy at the Gerald R. Ford School at the University of Michigan, having joined the faculty in 2000. Davis also is a professor of health management and policy at the School of Public Health. He previously served as the chief medical executive of the Michigan Department of Community Health/Department of Health and Human Services.

Eric Rothstein is a national water issues consultant and principal at the Galardi Rothstein Group. He served as an independent advisor on the creation of the Great Lakes Water Authority. Rothstein also has served as Jefferson County, Alabama's rate consultant and municipal adviser for litigation related to the county's bankruptcy and issuance of $1.7 billion in sewer warrants and led strategic financial planning for the City of Atlanta's Department of Watershed Management. He has more than 30 years of experience in water, wastewater and stormwater utility finance and rate-making assessments.

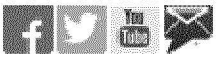
Lawrence Reynolds, M.D., is a pediatrician in Flint who serves as president of the Mott Children's Health Center. He received his medical degree from Howard University College of Medicine and has been in practice for 36 years. He has served as president of the Genesee County Medical Society and the Michigan Chapter of the American Academy of Pediatrics. He has been honored for his humanitarian and advocacy efforts on behalf of children from the Community Foundation of Greater Flint.

Snyder has said reconnecting with the authority is a critical step to resolving water quality issues and addressing related health concerns. It will not immediately resolve the city's problem with lead service lines or aging infrastructure. It will take time for pipes in Flint to become coated with the phosphate corrosion control.

To best protect public health, state and local authorities will continue to carry out steps outlined on Oct. 2 in a comprehensive action plan, including continued testing, the use of faucet filters and providing residents with accurate information about steps to eliminate lead exposure. The Michigan Departments of Environmental Quality and Health and Human Services are continuing to provide free water filters, free lead testing through the state laboratory for Flint water customers, and hiring additional staff to conduct health exposure monitoring for lead in drinking water.

####

STAY CONNECTED:



DEQ e-clips

Week of October 12, 2015

Flint Water Articles

Detroit Free Press: Chemical testing could have predicted Flint's water crisis
http://www.freep.com/story/news/local/michigan/2015/10/10/missed-opportunities-flint-water-crisis/73688428/

Flint doctor makes state see light about lead in water
http://www.freep.com/story/news/local/michigan/2015/10/10/hanna-attisha-profile/73600120/

What happens to Flint kids poisoned with lead?
http://www.freep.com/story/opinion/contributors/2015/10/12/what-happens-flint-kids-poisoned-lead/73820368/

Why lawsuit over Flint water is a long shot
http://www.freep.com/story/news/local/michigan/2015/10/15/can-flint-residents-sue-over-bad-water/73946936/

Michigan's mounting water failures
http://www.freep.com/story/opinion/contributors/2015/10/15/michigans-mounting-water-failures/73830438/

Michigan to launch lead education effort statewide
http://www.freep.com/story/news/local/michigan/2015/10/13/lead-water-flint-michigan-testing/73871480/

Detroit News: House OKs $9.3M for Flint water switch
http://www.detroitnews.com/story/news/local/michigan/2015/10/14/house-oks-flint-water-switch/73969886/

EPA creates task force to help Flint's water system
http://www.detroitnews.com/story/news/local/michigan/2015/10/16/epa-flint-water/74053912/

MLive: First warning of rising lead levels in Flint water came 9 months ago
http://www.mlive.com/news/flint/index.ssf/2015/10/first_warning_of_rising_lead_l.html#incart_story_package

General Motors plant won't use Flint water until KWA pipeline complete
http://www.mlive.com/news/flint/index.ssf/2015/10/gm.html#incart_story_package

Lawmaker's lawsuit claims Flint, state withheld documents on water safety
http://www.mlive.com/news/flint/index.ssf/2015/10/lawmakers_lawsuit_claims_flint.html

Sorry seems to be the hardest word for the state to say to Flint
http://www.mlive.com/news/flint/index.ssf/2015/10/sorry_seems_to_be_the_hardest.html#incart_story_package

Flint's $2 million share for Detroit water reconnection a done deal
http://www.mlive.com/news/flint/index.ssf/2015/10/state_oversight_board_makes_fl.html

Newsweek column calls Flint 'cheapskate city that poisoned its children'
http://www.mlive.com/news/flint/index.ssf/2015/10/newsweek_column_calls_flint_ch.html

Michigan Radio: Where are the records? Lawmaker wants answers on Flint water switch
http://michiganradio.org/post/where-are-records-lawmaker-wants-answers-flint-water-switch#stream/0

MDEQ director: Flint water crisis has shaken faith in government
http://michiganradio.org/post/mdeq-director-flint-water-crisis-has-shaken-faith-government#stream/0

Monroe News: Officials keeping eye on local water supply
http://www.monroenews.com/news/2015/oct/16/officials-keeping-eye-local-water-supply/

Newsweek: Flint: The Cheapskate City That Poisoned Its Children
http://www.newsweek.com/flint-cheapskate-city-poisoned-its-children-381717

DEQ e-clips

Week of October 5, 2015

Articles with regard to the Flint Water Issue

9&10 News: Snyder supports switching Flint water system back to Detroit
http://www.9and10news.com/story/30218589/snyder-supports-switching-flint-water-system-back-to-detroit

Al Jazeera America: The fight for clean water in Flint, Michigan
http://america.aljazeera.com/articles/2015/10/8/the-fight-for-clean-water-in-flint-michigan.html

Detroit Free Press: Avoiding tap water has become a way of life in Flint
http://www.freep.com/story/opinion/columnists/nancy-kaffer/2015/10/03/life-flint-sickening-water/73219988/

For Flint, vindication -- for Snyder, more questions
http://www.freep.com/story/opinion/editorials/2015/10/02/flint-vindication----snyder-more-questions/73207200/

Waiting for answers, action in Flint water crisis
http://www.freep.com/story/opinion/columnists/nancy-kaffer/2015/10/07/flint-water-crisis/73534078/

Flint water crisis: An obscene failure of government
http://www.freep.com/story/opinion/editorials/2015/10/08/flint-water-crisis-obscene-failure-government/73578640/

Detroit News: Coalition asks EPA to intervene in Flint water issue
http://www.detroitnews.com/story/news/local/michigan/2015/10/01/flint-water-epa/73160176/

State plans Flint water filter giveaway Tuesday
http://www.detroitnews.com/story/news/politics/2015/10/05/state-flint-water-filter-giveaway/73411770/

State: Flint will reconnect to Detroit water system
http://www.detroitnews.com/story/news/local/michigan/2015/10/08/flint-health-experts-support-detroit-water-reconnection/73568654/

Flint water tests suggest statewide lead issues
http://www.detroitnews.com/story/news/politics/2015/10/08/flint-water/73623958/

MLive: Statewide donations of clean water pour in for Flint students, residents
http://www.mlive.com/news/flint/index.ssf/2015/10/post_444.html#incart_river_home

Water, water everywhere and not a drop that's safe to drink -- Andrew Heller
http://blog.mlive.com/flintjournal/aheller/2015/10/water_water_everywhere_and_not.html#incart_river_home

Put Flint back on Detroit water ASAP, expert panel tells mayor, governor
http://www.mlive.com/news/flint/index.ssf/2015/10/some_committee_members_speak_u.html

Toxic lead levels found in water at three Flint schools
http://www.mlive.com/news/flint/index.ssf/2015/10/three_flint_schools_water_exce.html

When did state know about lead in Flint water? 6 takeaways from Snyder plan
http://www.mlive.com/news/flint/index.ssf/2015/10/seven_key_takeaways_from_gov_s.html#incart_river_home

State should pay for its own mistakes in Flint water crisis
http://www.mlive.com/opinion/flint/index.ssf/2015/10/editorial_flint_water_slap_in.html

Michigan Radio: State plan for Flint's water woes doesn't please some residents
http://michiganradio.org/post/state-plan-flints-water-woes-doesnt-please-some-residents

Sorting out accountability in Flint water issues is "relatively complex"
http://michiganradio.org/post/sorting-out-accountability-flint-water-issues-relatively-complex#stream/0

Flint never had a plan to control corrosion in old water pipes
http://michiganradio.org/post/flint-never-had-plan-control-corrosion-old-water-pipes

Gov. Snyder moves to come up with $12 million to switch Flint's water back to Detroit's supply
http://michiganradio.org/post/gov-snyder-moves-come-12-million-switch-flints-water-back-detroits-supply

The Times Herald: Flint water woes put rush on Lake Huron waterline
http://www.thetimesherald.com/story/news/local/2015/10/06/flint-water-woes-put-rush-lake-huron-waterline/73473466/?from=global&sessionKey=i5TEHSosZtesOR8Km7dDPx2FOwImaBDK4V-18x2dg0ykfJgytbhCebRgM0lgDAx3Dx3DCWfDf247osx2BOvV4Fs5L8kgx3Dx3D-7OiaAuMyZ0DZnpDlwH5hggx3Dx3D-BSbDHxx3VpNx2BzSS4fs9Ockgx3Dx3D&autologin=Hx2BZA77c0x2BWoNgJigcepoU5TXXdGZMGtrC49DeQw0Irsx3D

U.S. News & World Report: Michigan pledges $1M for filters, steps to fix city's water after tests show high lead levels
http://www.usnews.com/news/us/articles/2015/10/02/public-health-emergency-declared-due-to-lead-in-flint-water

From: Anderson, Madhu (DEQ)
Sent: Thursday, October 22, 2015 4:54 PM
To: Davis, Matthew (Matt); erothste@grg-ltd.com; Ken Sikkema; Chris Kolb; reynolds@mottchc.org
Cc: VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: RE: Task Force - Email 3: Outreach materials
Attachments: deq-2015-10-14_-_Lead_-_Flint_Water_Fact_Sheet_02_503394_7.pdf; FlintWater_Tips_100115_002_501845_7.pdf; Parent_Handout_Sept2015_501830_7.pdf

All – these are general outreach materials that have been provided to the public.

Madhu R. Anderson
Deputy Director, Economic & Strategic Initiatives
☎ 517 284 6702 | [redacted]
✉ andersonm30@michigan.gov
DEQ

Frequently Asked Questions About
Lead in Flint Water

MDHHS
Michigan Department of Health & Human Services

- Lead is hard to avoid completely. It can be found in old paint, water pipes and brass water faucets, in dirt, at some job sites, and in metal used for some hobbies.
- The amount of lead found in some Flint homes' drinking water could affect kids' health.
  - Even small amounts of lead can harm kids' health because they are little and still growing.
  - Adults are less likely to be harmed by the levels found in the water.
- Filter your drinking water using an NSF-approved filter. Find an approved filter at http://www.gchd.us/docs/lead_filter_information.pdf.
- Some filters can remove up to 99% of the lead in water when used properly. To be sure your filter is removing as much lead as it can, carefully follow the instructions that came with it.
  - Change the filter cartridge as often as you should.
  - Run only cold water through the filter.
- Even after changes to the water system, it may take a while before lead levels in your home's water drop. Use the tips below to know when it's best to use filtered water:

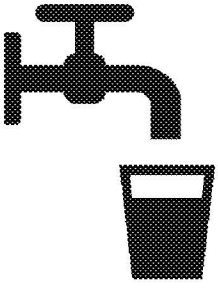
Lead in Water

Although your water may be a different color sometimes, it is not caused by lead. It's important to remember:

- **You can't see, smell, or taste lead in water.**
- **Lead won't change the color of your water.**
- **The only way to know what your home's lead levels are is by having your water tested in a lab.**

Please call the Flint Water Dept. at 810-787-6537 to request a free or low-cost water test.

In The Kitchen



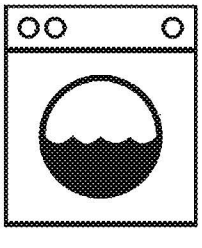
Use filtered tap water for:

- Drinking (including making coffee, drink mixes, juice, baby formula)
- Cooking (even if you boil the water, the lead will stay in the water and food)
- Washing fruits and vegetables

You can use unfiltered tap water for:

- Washing your hands
- Washing dishes
- Wiping down countertops

Cleaning



You can use unfiltered tap water for:

- Mopping floors
- Washing clothes

Your washing machine and dryer won't put lead from the water into the air of your home.

In the Bathroom

Use <u>filtered</u> tap water for:

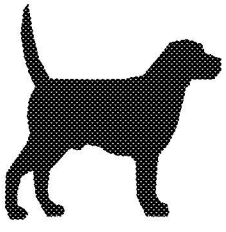
- Brushing kids' teeth

You can use <u>unfiltered</u> tap water for:

- Showers
- Baths (don't let kids drink the water as they play in the tub)
- Brushing your teeth (if you are an adult)

Lead will not cause rashes or other skin problems. However, if chlorine levels or other cleaners are high in the water, it may cause itchy or dry skin (similar to what can happen when you swim in a pool).

Caring for Pets



Use <u>filtered</u> tap water for:

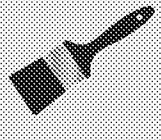
- Pets' water bowls

You can use <u>unfiltered</u> tap water for:

- Baths

If you notice your pet acting differently than normal, please contact your vet.

Other Sources of Lead in Your Home



Lead Paint

- Homes built before 1978 likely have lead paint, both inside and outside.
- Old paint is the most common way that kids are exposed to lead.

Dirt

- If you live in the city, there may be lead in the dirt outside your home.
- Before 1996, gas and the exhaust from cars contained lead. More lead will be found in dirt in busy traffic areas.

Dust

- The dust in your home can contain tiny amounts of both the paint and the dirt that contain lead.

Hobbies & Jobs

- Solder, fishing sinkers, bullets, and stained glass framing materials are some of the items in your home that may contain lead. You could also track home lead dust from your job site.

Have Questions?

For more information about protecting yourself and your family from lead, please visit:

<u>www.michigan.gov/lead</u>

Or you can call the Michigan Department of Health and Human Services at:

1-800-648-6942

The staff at this number will help direct you to the best department that can answer your questions about lead in your home.

To request a free or low-cost water test, please call the Flint Water Dept. at:

1-810-787-6537

MDHHS

Michigan Department of Health & Human Services

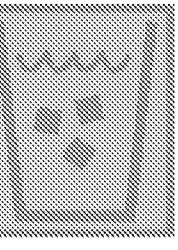
TAKING ACTION ON FLINT WATER

www.mi.gov/FlintWater

- Tips for Flint Residents -

Lead plumbing is common in homes built prior to 1986, and anyone in the state with lead pipes in their home can take some extra precautions to minimize lead in their drinking water.

1. Get your water tested at no cost to ensure water is safe. **To get your water tested**, please call the City of Flint Water Plant at (810) 787-6537 and then press 1.

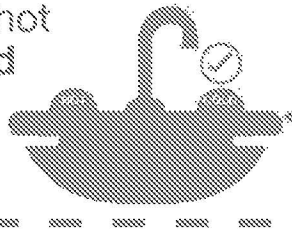


2. To ensure safe drinking water, you can also get a free filter. Please visit **mi.gov/FlintWater** to find where you can get a free filter.

3. It takes time for lead to accumulate in drinking water from plumbing, and so **flushing your pipes prior to using them** can significantly reduce your exposure.

- To flush your pipes, run the water until it is as cold as it will get. This can take as little as 30 seconds if you have just run the toilet or otherwise used water in your home, or as long as 2 to 3 minutes if you have not used any water in hours.
- In the City of Flint, **running the water for 3 minutes costs between 3 and 16 cents.**

4. Additionally, more lead gets into hot water than cold water. **Use only cold water for drinking, cooking and making baby formula.**



To get your water tested for free, please call the city of Flint Water Plant at (810) 787-6537 and then press 1.
You can also email flintwater@cityofflint.com

Visit **www.mi.gov/FlintWater** for more information

IS YOUR CHILD SAFE FROM LEAD POISONING?

LEARN HOW TO PROTECT YOUR FAMILY:

CREATE A LEAD SAFE HOME

What causes lead poisoning?

There are many places in a home that can put babies and children in danger of lead poisoning.

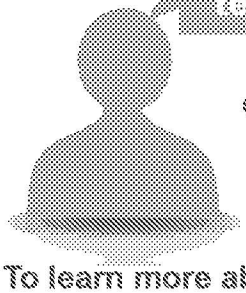
Lead paint is the #1 cause of lead poisoning in Michigan and is often found in homes built before 1978. The older the home, the more likely that painted surfaces like windows, cupboards, doors and porches will contain lead paint.

Lead poisoning occurs most often when children come in contact with lead in the air, in dust particles and in lead paint. Lead can also be found in soil, drinking water if supplied by lead pipes, certain home remedies and is used in some hobbies and occupations.

Exposure to lead particles is a serious health threat. Carefully consider where your child spends time (childcare, relatives, your home) when thinking about lead poisoning hazards.

How can I tell if my child has lead poisoning?

Talk to your doctor about testing your child's blood for lead poisoning.



When should my child be tested for lead poisoning?

Children should be tested at one and two years of age or if you think your child has been exposed to a lead hazard.

To learn more about lead poisoning prevention and blood lead testing, call the Childhood Lead Poisoning Prevention Project:

(517) 335-8885

(888) 322-4453

Take this quiz to see if your child may have lead poisoning:

Symptoms of lead poisoning can be silent—and hard to recognize. Preventing lead poisoning before it happens is the best way to keep your family safe. Take this quiz to see if your child may be at risk.

Does your child currently live in a home built before 1950 or have they lived in a home built before 1950 in the recent past? Do they spend time at or often visit a home built before 1950?

Yes No Don't know

Does your child currently live in a home built before 1978 that was recently remodeled? Have they lived in or often visited a home built before 1978 that was recently remodeled?

Yes No Don't know

Does your child have a brother, sister or playmate with lead poisoning?

Yes No Don't know

Does your child live with an adult whose job or hobby involves lead?

Yes No Don't know

Does you or your child's caregiver use home remedies that may contain lead?

Yes No Don't know

If you answered NO to all of these questions, your child is probably not at risk for lead poisoning.

If you answered YES or DON'T KNOW to any of these questions, talk to your doctor about testing your child for lead poisoning.

MAKE EVERY DAY LEAD SAFE

Safe Cleaning. Use these steps to help keep your home clean and reduce your child's risk of exposure. Use these tips to clean your windows, doors, floors, porches, stairs and child pay areas.

Put on gloves. If you do not have rubber gloves, wash your hands well after cleaning.

Use the right cleaners and disposable supplies. Use soapy cleaners or products made to remove lead dust.

Remove paint chips first. Window areas and porches often have peeling paint and lead dust. Pick up visible chips and dispose of them in a plastic bag.

Always wet-mop floors and window sills. Do not broom lead dust. Dispose of cloths after wiping each area. If using a mop, replace water frequently.

Don't use a vacuum unless it is a HEPA vacuum. It will spread lead dust into the air you breathe. Some health departments have HEPA vacuums available to borrow

Rinse after cleaning. Use clean water and a new mop head or fresh paper towels to wipe away suds.

Always empty wash water down a toilet.

Repeat these steps often when dirt and dust appear on floors, porches, window wells, window sills, stairs and children's play areas.

For Homes with Lead Pipes

If you use a water filter, be sure it meets NSF/ANSI 53 standards for lead reduction.

✓**Flush your pipes before drinking**, and only use cold water for cooking and mixing formula. Flush pipes by running the water for approximately 5 minutes.

✓**Test.** Consider contacting your local water authority to have your water tested.

Daily Lead Safe Practices

- Wash hands, bottles, pacifiers and toys often
- Always take off shoes before going into the house.
- Watch your child's diet. Foods high in calcium and iron help keep lead from being absorbed by a child's body.
- Avoid using power sanders, open-flame torches, heat guns, dry scrapers and dry sandpaper o painted surfaces.
- Fix peeling or chipping paint.
- Use a certified Repair and Remodeling Professional when making updates to your home
- Practice safe cleaning methods.

Thinking about remodeling your home? Need advice about identifying and removing lead paint? Call the Lead and Healthy Homes Section: 866-691-LEAD.

www.michigan.gov/lead

MDHHS
Michigan Department of Health & Human Services

Childhood LEAD POISONING prevention program

From: Anderson, Madhu (DEQ)
Sent: Thursday, October 22, 2015 4:56 PM
To: Davis, Matthew (Matt); [redacted]; Ken Sikkema; Chris Kolb; reynolds@mottchc.org
Cc: VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: RE: Task Force - Email 4: Rule and Law References
Attachments: Links to statutes rules etc.docx; LeadandCopperQuickReferenceGuide_2008.pdf; ODWMA-399-027 Lead and Copper Rule Implementation.pdf

All – the attachments include a document that has several links to statutes and rules, a DEQ policy regarding the Lead and Copper Rule, and copy of the EPA's quick reference guide to the Lead and Copper Rule.

Madhu R. Anderson
Deputy Director, Economic & Strategic Initiatives
☎ 517 284 6702 | [redacted]
✉ andersonm30@michigan.gov
DEQ

Paths/links to statutes, rules, policies and other procedure documents to implement the rule for community water supplies:

The federal rule

http://www.ecfr.gov/cgi-bin/text-idx?SID=fe2762d6b189d778a3f99536590b96b0&node=40:23.0.1.1.3&rgn=div5#sp40.23.141.i

Michigan Safe Drinking Water Act 1976 PA 399

http://www.legislature.mi.gov/(S(syyqs5kcvvfi1br5l11wz4np))/mileg.aspx?page=getObject&objectName=mcl-Act-399-of-1976

Supplying Water to the Public (administrative rules promulgated under Safe Drinking Water Act 1976 PA 399)

http://w3.lara.state.mi.us/orr/Files/AdminCode/1346_2014-023EQ_AdminCode.pdf

Lead and Copper Report and Consumer Notice of Lead Result Certificate
http://www.michigan.gov/documents/deq/deq-wb-dwehs-cws-LeadCopperRptConsNotice_294665_7.pdf

Sampling Instructions:
http://www.michigan.gov/documents/deq/Lead_Copper_Sampling_Instructions_329915_7.pdf

Flow chart of monitoring requirements for medium and small water supplies:
http://www.michigan.gov/documents/deq/Lead_-_Flow_Chart_330101_7.pdf

The U.S. EPA publishes documents States and water supplies use to implement the rule under the heading "EPA Compliance Help" at http://water.epa.gov/lawsregs/rulesregs/sdwa/lcr/compliancehelp.cfm and includes these and other EPA publications:

- Lead and Copper Rule: A Revised Quick Reference Guide (PDF) (2 pp, 125K) EPA816-F-08-018 June 2008
- Final Revised Guidance Manual for Selecting Lead and Copper Control Strategies (PDF) (54 pp, 664K) EPA 816-R-03-001, March 2003
- LCR Guidance Manual Vol II CCT (PDF)
- Lead and Copper Rule Public Education & Other Public Information Requirements for Community Water Systems Fact Sheet (PDF) (5 pp, 719K) EPA 816-F-08-019 June 2008
- Revised Lead and Copper Monitoring and Reporting Guidance for Public Water Systems (PDF) (126 pp, 2MB) EPA-816-R-10-004, March 2010
- Lead and Copper Rule (LCR) 2007 Short-Term Regulatory Revisions and Clarifications State Implementation Guidance (PDF) (75 pp, 586K) EPA 816-R-08-017, June 2008
- State Implementation Guidance for the Lead and Copper Rule Minor Revisions (PDF) (128 pp, 645K) EPA 816-R-01-021, October 2001

EPA
United States
Environmental Protection
Agency

Lead and Copper Rule: A Quick Reference Guide

Overview of the Rule

Title[1]	Lead and Copper Rule (LCR)[2], 56 FR 26460 - 26564, June 7, 1991
Purpose	Protect public health by minimizing lead (Pb) and copper (Cu) levels in drinking water, primarily by reducing water corrosivity. Pb and Cu enter drinking water mainly from corrosion of Pb and Cu containing plumbing materials.
General Description	Establishes action level (AL) of 0.015 mg/L for Pb and 1.3 mg/L for Cu based on 90th percentile level of tap water samples. An AL exceedance is not a violation but can trigger other requirements that include water quality parameter (WQP) monitoring, corrosion control treatment (CCT), source water monitoring/treatment, public education, and lead service line replacement (LSLR).
Utilities Covered	All community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) are subject to the LCR requirements.

Public Health Benefits

Implementation of the LCR has resulted in	▶ Reduction in risk of exposure to Pb that can cause damage to brain, red blood cells, and kidneys, especially for young children and pregnant women. ▶ Reduction in risk of exposure to Cu that can cause stomach and intestinal distress, liver or kidney damage, and complications of Wilson's disease in genetically predisposed people.

Major Monitoring Provisions

Lead and Copper Tap

Applicability	▶ All CWSs and NTNCWSs.
Standard	▶ CWSs and NTNCWSs must collect first-draw samples at taps in homes/buildings that are at high risk of Pb/Cu contamination as identified in 40 CFR 141.86(a). ▶ Number of samples is based on system size (see Table 1). ▶ Systems must conduct monitoring every 6 months unless they qualify for reduced monitoring.
Reduced	▶ See Table 1 for sample number and Table 2 for criteria.

Water Quality Parameter (WQP)

Applicability	▶ Systems serving > 50,000 people. ▶ Systems serving ≤ 50,000 during monitoring periods in which either AL is exceeded.
Standard	▶ WQP samples at taps are collected every 6 months. ▶ WQPs at entry points to distribution system (EPTDS) are collected every 6 months prior to CCT installation, then every 2 weeks.
Reduced	▶ See Table 1 for sample number and page 2 for criteria. Does not apply to EPTDS WQP monitoring.

Table 1: Lead and Copper Tap and WQP Tap Monitoring

Size Category	System Size	Number of Pb/Cu Tap Sample Sites[3]		Number of WQP Tap Sample Sites[4]	
		Standard	Reduced	Standard	Reduced
Large	> 100K	100	50	25	10
	50,001 - 100K	60	30	10	7
Medium	10,001 - 50K	60	30	10	7
	3,301 - 10K	40	20	3	3
Small	501 - 3,300	20	10	2	2
	101 - 500	10	5	1	1
	≤ 100	5	5	1	1

[3] With written State approval, PWSs can collect < 5 samples if all taps used for human consumption are sampled.
[4] Two WQP tap samples are collected at each sampling site.

Table 2: Criteria for Reduced Pb/Cu Tap Monitoring

Annual	1. PWS serves ≤ 50,000 people and is ≤ both ALs for 2 consecutive 6-month monitoring periods; or 2. Any PWS that meets optimal WQPs (OWQPs) and is ≤ Pb AL for 2 consecutive 6-month monitoring periods.
Triennial	1. PWS serves ≤ 50,000 people and is ≤ both ALs for 3 consecutive years of monitoring; or 2. Any PWS that meets OWQP specifications and is ≤ Pb AL for 3 consecutive years of monitoring; or 3. Any PWS with 90th percentile Pb and Cu levels ≤ 0.005 mg/L and ≤ 0.65 mg/L, respectively, for 2 consecutive 6-month monitoring periods (i.e., accelerated reduced Pb/Cu tap monitoring).
Every 9 years	PWS serves ≤ 3,300 people and meets monitoring waiver criteria found at 40 CFR 141.86(g).

Lead Consumer Notice

Within 30 days of learning the results, all systems must provide individual Pb tap results to people who receive water from sites that were sampled, *regardless of whether the results exceed the Pb AL*, as required by 40 CFR 141.85(d).

Consumer Confidence Report (CCR)

All CWSs, irrespective of their lead levels, must provide an educational statement about lead in drinking water in their CCRs as required by 40 CFR 141.154. Must be in 2008 CCR (due July 1, 2009) if EPA is Primacy Agency, State adopts the rule by reference automatically, or adopts during 2008. Otherwise, this statement is required in the 2009 CCR (due July 1, 2010).

[1] This document provides a summary of federal drinking water requirements, to ensure full compliance, please consult the federal regulations at 40 CFR 141 and any approved state requirements.

[2] The June 1991 LCR was revised with the following Technical Amendments: 56 FR 32112, July 15, 1991; 57 FR 28785, June 29, 1992; 59 FR 33860, June 30, 1994.

It was subsequently revised by: the LCR Minor Revisions, 65 FR 1950, January 12, 2000; and the LCR Short-Term Revisions, 72 FR 57782, October 10, 2007.

Treatment Technique and Sampling Requirements if the AL is Exceeded[5]

[5] Based on 90th percentile level. Multiply number of valid samples by 0.9 (e.g., 10 samples x 0.9 = 9; thus, use 9th highest Pb and Cu test result to compare to AL). For 5 samples, average 4th and 5th highest results. For < 5 samples, use highest result.

Water Quality Parameter (WQP)

Applicability	Refer to page 1.
Parameters	► pH, alkalinity, calcium *(initial only, unless calcium carbonate stabilization is used)*, conductivity *(initial monitoring only)*, orthophosphate *(if inhibitor is phosphate-based)*; silica *(if inhibitor is silicate-based)*, and temperature *(initial monitoring only)*.
Frequency	► Systems installing CCT, must conduct follow-up monitoring for 2 consecutive 6-month periods. ► WQP tap monitoring is conducted every 6 months, EPTDS monitoring increases to every 2 weeks. ► After follow-up monitoring, State sets OWQP specifications that define optimal CCT.
Reduced Tap Monitoring	► Collect reduced number of sampling sites (see Table 1) if meet OWQPs for 2 consecutive 6-month periods. ► Collect reduced number of sampling sites at reduced frequency if meet OWQPs for: – 6 consecutive 6-month monitoring periods can monitor annually; – 3 consecutive years of annual monitoring can monitor triennially.

Public Education (PE)

Applicability	► Systems that exceed the Pb AL (*not required if only the Cu AL is exceeded*).
Purpose	► Educates consumers about lead health effects, sources, and steps to minimize exposure.
Delivery Method	► CWSs: deliver materials to bill-paying customers and post lead information on water bills, work in concert with local health agencies to reach at-risk populations (children, pregnant woman), deliver to other organizations serving "at-risk" populations, provide press releases, include new outreach activities from list in 40 CFR 141.85(a)(2)(vi), and post to Web site (CWSs serving > 100,000 only). ► NTNCWSs: posting and distribution to all consumers (can be electronic with State permission). Can apply to CWSs such as hospitals and prisons where population cannot make improvements.
Timing	► Within 60 days *after end of monitoring period* in which Pb AL was exceeded if not already delivering PE.[6] ► Repeat annually except: water bill inserts - quarterly; press releases - 2x/year, and Web posting - continuous. ► Can discontinue whenever ≤ Pb AL but must recommence if subsequently exceed Pb AL.

[6] State may allow extension in some situations. Also, State may require approval of message content prior to delivery.

Source Water Monitoring and Source Water Treatment (SOWT)

Applicability	► Systems that exceed Pb or Cu AL.
Purpose	► Determine contribution from source water to total tap water Pb and Cu levels and need for SOWT.
Timing	► One set of samples at each EPTDS is due within 6 months of first AL exceedance. ► System has 24 months to install any required SOWT. ► State sets maximum permissible levels (MPLs) for Pb and Cu in source water based on initial and follow-up source water monitoring.
Standard	► Ground water PWSs monitor once during 3-year compliance periods; surface water PWSs monitor annually.
Reduced	► Monitor every 9 years if MPLs are not exceeded during 3 consecutive compliance periods for ground water PWSs or 3 consecutive years for surface water PWSs.

Corrosion Control Treatment (CCT)

Applicability	► All large systems except those meeting requirements of 40 CFR 141.81(b)(2) or (b)(3). ► Medium and small systems that exceed either AL; may stop CCT steps if ≤ both ALs for 2 consecutive 6-month periods but must recommence CCT if subsequently exceed either AL.
Study	► All large systems except as noted above. ► If State requires study for small or medium systems, it must be completed within 18 months.
Treatment	► Once State determines type of CCT to be installed, PWS has 24 months to install. ► Systems installing CCT must conduct 2 consecutive 6 months of follow-up tap and WQP monitoring.
OWQPs	► After follow-up Pb/Cu tap and WQP monitoring, State sets OWQPs. *Refer to WQP section above.*

Lead Service Line Replacement (LSLR)

Applicability	► Systems that continue to exceed the Pb AL after installing CCT and/or SOWT. ► Can discontinue LSLR whenever ≤ Pb AL in tap samples for 2 consecutive 6-month monitoring periods; must recommence if subsequently exceed.
Monitoring	► Optional: Sample from LSL to determine if line must be replaced. If all samples are ≤ 0.015 mg/L, line is considered "replaced through testing"; must reconsider these lines if Pb AL is subsequently exceeded. ► Required: Sample from any LSLs not completely replaced to determine impact on Pb levels.
Replacement	► Must replace at least 7% of LSLs annually; State can require accelerated schedule. ► If only portion of LSL is replaced, PWS must: – Notify customers at least 45 days prior to replacement about potential for increased Pb levels. – Collect samples within 72 hours of replacement and provide results within 3 days of receipt.

For additional information on the LCR

Call the Safe Drinking Water Hotline at 1-800-426-4791; visit the EPA Web site at http://water.epa.gov/drink; or contact your State drinking water representative.

DEQ	OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE POLICY AND PROCEDURE		DEPARTMENT OF ENVIRONMENTAL QUALITY
Original Effective Date: August 4, 2003 **Revised Date:** **Reformatted Date:** January 17, 2013	**Subject:** Lead and Copper Rule Implementation		**Category:** ☐ Internal/Administrative ☐ External/Noninterpretive ☒ External/Interpretive
	Division/Office and Program Names: ODWMA-Public Water System Supervision Program		
	Number: ODWMA-399-027	**Page:** 1 of 9	

A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of, or procedures and practices available to, the public; and does not have the force and effect of law.

INTRODUCTION, PURPOSE, OR ISSUE:

The Lead and Copper Rule (LCR) of the National Primary Drinking Water Regulations was promulgated by the United States Environmental Protection Agency (U.S. EPA) under the federal Safe Drinking Water Act. The complexity of the rule necessitates guidance to maintain consistent implementation of the rule by field staff. Field staff include the Department of Environmental Quality (DEQ) public water supply (PWS) staff and local health department (LHD) staff. The LHDs oversee the Nontransient Noncommunity Water Supplies (NTNCWS) under authority delegated by the DEQ.

This policy replaces Water Division Policy and Procedure WD-03-019, Lead and Copper Rule Implementation, dated August 4, 2003.

AUTHORITY:

The following are the administrative rules promulgated under the Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), related to the LCR (R 325.10101 *et seq.*):

- Rule 410 – Public Education and Consumer Notice of Lead Result
- Rule 604f – Corrosion Control Treatment, Source Water Treatment, and Lead Service Line Replacement
- Rules 710a, 710b and 710c – Monitoring
- Rule 710d – Reporting
- Rule 734 – Reporting of Results of Analyses
- Rule 1506 – Retention of Records

LIST OF ACRONYMS:

Act 399	Safe Drinking Water Act, 1976 PA 399, as amended
AL	Action Level
CCT	Corrosion control treatment
CDS	Combined distribution system
CDW	Community Drinking Water
CS	Consecutive Systems
CWS	Community Water Supply
LCR	Lead and Copper Rule
LHD	Local Health Department
MCS	Modified Consecutive System
mg/L	milligrams per liter
NPDWS	Noncommunity and Private Drinking Water Supplies
NTNCWS	Nontransient Noncommunity Water Supplies
OWQP	Optimal water quality parameters
PE	Public Education
POU or POE	Point of use or point of entry device
PWS	Public water supply
Rule 410	R 325.10410 and similarly throughout
WQP	Water quality parameters

DEFINITIONS:

"Improper sample" – a sample that does not meet all three of the following conditions as required in Rule 710a(2)(b):

- Sample that is one liter in volume.
- Sample that is first draw after the water has sat motionless in the plumbing for not less than six hours. Non-first draw samples may be allowed in facilities such as a prison or a hospital under Rule 710a(2)(e).
- Sample from either a:
    - Residential site cold water kitchen tap or bathroom sink tap, or
    - Nonresidential site interior tap typically used for consumption.

"Invalid sample" – a sample that meets one or more of the following conditions under Rule 710a(6):

- The laboratory establishes that improper sample analysis caused erroneous results.
- The sample container was damaged in transit.
- There is substantial reason to believe that the sample was subject to tampering.
- Field staff determine that the sample was taken from a site that did not meet sample site criteria as listed in Rule 710a(1)(c) to (e) and (h) for CWS and listed in Rule 710a(1)(f) to (h) for NTNCWS.

"Optimal water quality parameters (OWQP)" – the water quality parameters with limits, values, and dosages set by field staff under Rule 604f(3)(f) that represent optimal corrosion control treatment (CCT).

"Reduced number of sites" – the number of distribution system sites sampled for either:
- Lead and copper under the reduced monitoring column in the table in Rule 710a(3)(a) or
- WQP in Rule 710b(7)(a).

"Small, medium, or large water supply" – a water supply serving 3,300 or fewer people (small), greater than 3,300 and fewer than 50,001 people (medium), or more than 50,000 people (large), respectively.

"Standard number of sites" – the number of distribution system sites sampled for either:
- Lead and copper under the standard monitoring column in the table in Rule 710a(3) or
- WQP in Rule 710b(3)(a).

"Water quality parameters (WQP)" – parameters that are monitored for at the entry points to the distribution system and in the distribution system during the initial monitoring periods prior to CCT, during the follow-up monitoring period after CCT is installed, and during each six month monitoring period after field staff designate optimal CCT.

POLICY:

1. Summary of Rule Requirements

Corrosion causes lead and copper to leach from pipes in the distribution system. The LCR requires water supplies to optimize CCT to minimize consumers' exposure to lead and copper in drinking water.

Water supplies select and monitor distribution system sites that are most at risk of corrosion. Field staff may consider the small or medium water supply as having optimized CCT if results do not exceed the action level (AL) for lead of 0.015 milligram per liter (mg/L) and copper of 1.3 mg/L in 90 percent of sites tested during two consecutive six-month monitoring periods. Small and medium supplies that cannot demonstrate optimal CCT in two consecutive six month monitoring periods must commence CCT steps. All large water supplies must complete CCT steps, regardless of lead and copper levels. A water supply notifies consumers of the lead levels found at the site that was tested. Any supply that exceeds the lead AL must provide public education (PE) materials.

Source water treatment or lead service line replacement may be required when an AL continues to exceed after installing CCT. This policy does not discuss source water treatment or lead service line replacement.

2. Site Selection

a. Summary of Rule Requirements:
Water supplies select distribution sites that are most at risk of corrosion and categorize each site as Tier 1, 2, 3 based on risk. If insufficient Tier 1, 2, or 3 sites are available, the sampling pool is completed with representative sites with plumbing materials

commonly found at other sites in the distribution system. As a site becomes unavailable, the site may be replaced provided the new site is selected based on Tier 1, 2, and 3 priorities. A replaced site should be explained when reporting on lead and copper monitoring.

b. Selecting Tier 1 Sites Based on Year Built:
Tier 1 sites are single family structures with:
   i. lead piping, or
   ii. lead service lines, or
   iii. copper piping and lead solder built after 1982 as per rule. It is believed that the corrosion may have stabilized in pipes of older structures built in 1982 or before, while newer pipes may continue to leach lead and copper for some time. However, due to a lead ban in 1987, structures built in 1987 or later were considered lead free. Therefore, Tier 1 sites with copper piping and lead solder are structures built after 1982 and before 1987.

c. Softeners and Other Point of Use (POU) and Point of Entry (POE) Devices:
Sampling sites with faucets that have POU or POE treatment devices, such as softeners, shall not be used as Tier 1, 2, or 3 sites unless insufficient Tiered sites are available. Field staff shall encourage water supplies to sample from a kitchen or bathroom tap that is not normally connected to the softener. If a sample of softened water is analyzed, then the water supply may consider returning to the same site to collect a sample of unsoftened water. Some residents may be able to bypass the softener at the tap. Both sample results (softened and unsoftened) will be used to calculate the 90th percentile. Sample results shall not be deemed improper on the basis that the water passed through a softener.

d. Supplies that bottle water:
An NCWS that is a water bottling plant and has fewer than 25 employees is classified as an NTNCWS, but all sampling under Act 399 is conducted at the raw water tap. All other sampling of the plant distribution system or bottling and packaging facility is done under the authority of the Michigan Department of Agriculture and Rural Development under Section 17 of Act 399, MCL 325.1017.

3. Monitoring Requirements

a. Summary of Rule Requirements:
The required number of distribution system sites is based on the population served. A water supply may sample more than the required number in a monitoring period. Supplies with fewer than five taps, must sample 100 percent of taps typically used for human consumption.

b. Monitoring Period:
Annual and triennial monitoring is conducted during the months June through September unless an alternate four-month period is designated.

c. Insufficient Number of Samples Collected:
When fewer than the required number of samples are collected, field staff issue a monitoring and reporting (M/R) violation and calculate the 90th percentile based on available data. To return to compliance with monitoring requirements, field staff should direct the water supply to monitor again in the next available monitoring period – next six-month period, for those supplies on a six-month frequency, or next calendar year, for those supplies on reduced monitoring. Establish the next due date based on the return to compliance date and the previously assigned frequency.

d. Improper Sample:
Samples deemed improper are not used to calculate the 90th percentile. A water supply may deem a sample improper by not submitting the sample to the lab for analysis. Once a sample is analyzed, only the field staff may deem a sample improper with approval from the:
   i. Community Drinking Water (CDW) Unit Chief and notification of the Field Operations Section Chief, for CWSs, or
   ii. Noncommunity and Private Drinking Water Supplies (NPDWS) Unit Chief approval and notification of Environmental Health Section Chief for NTNCWS.

To deem a sample improper, field staff investigates all samples collected in the monitoring period and analyzed. The investigation includes a review of documents that demonstrate compliance with monitoring and testing requirements (for example, the Instruction Sheets that are completed by the resident). Extended stagnation is not a sufficient reason to deem a sample improper. Encourage water supplies to select sites that are in regular use. The supply may collect a replacement sample for a sample deemed improper provided the monitoring period has not ended.

e. Reduce Monitoring for Only One Contaminant:
Monitoring cannot be reduced for only one contaminant. The monitoring frequency is the same for both lead and copper, except under partial waiver provisions. To date, field staff have not granted full or partial waivers under Rule 710a(7).

f. Reduced Monitoring When Copper Exceeds AL:
Reduced monitoring is allowed in the rule when the copper 90th percentile exceeds the AL, provided the lead 90th percentile meets the AL after optimizing CCT under Rule 710a(4)(d)(ii) and (iii). However, the DEQ believes that a supply with a copper AL exceedence should remain on a six-month frequency for both lead and copper and will not reduce the monitoring frequency when an action level is exceeded.

4. Calculate Compliance

a. Summary of Rule Requirements:
Steps to calculate the 90th percentile are listed in Rule 604f(1)(c). When fewer than the required number of sample results is available, the 90th percentile is calculated based on the available data. When five samples are collected, the 90th percentile is the average of the highest and second highest concentrations. When fewer than five

samples are collected, the sample result with the highest concentration is the 90th percentile.

b. All Samples Analyzed Are Used to Calculate 90th Percentile:
All samples collected and analyzed within the monitoring period are used to calculate 90th percentile. However, samples deemed improper or invalid, even if analyzed, are not used to calculate the 90th percentile.

c. Samples Collected Outside Monitoring Period
Samples taken outside the monitoring period are not used to calculate compliance. However, one exception exists – when a sample is deemed invalid and the supply has too few samples to meet the minimum requirements, the supply collects a replacement sample not later than 20 days after the date the sample was invalidated or by the end of the monitoring period, whichever occurs later, as allowed in Rule 710a(6)(d).

d. Multiple Samples From Same Site:
Multiple samples collected from the same site <u>during</u> the monitoring period are all used to calculate the 90th percentile (do not average the multiple results). Samples collected <u>outside</u> the monitoring period are not included in the 90th percentile.

5. Corrosion Control

a. Equivalent Corrosion Control Steps:
At this writing, CWS have used CCT steps as per rule rather than equivalent activities. Under Rule 604f(2)(b)(ii), a water supply may be considered by field staff to have optimized CCT if the supply demonstrates to the satisfaction of field staff that it has conducted activities equivalent to the CCT steps applicable to the water supply under Rule 604f(3). This determination is on a case-by-case basis after field staff have consulted with the water treatment specialist for CWS or the NPDWS Unit Chief and staff for NTNCWS. Field staff provide the supply with written notice explaining the basis for its decision and specifies entry point OWQPs.

b. Modification of DEQ Treatment Decisions:
Under Rule 604f(3)(h), the DEQ may modify its optimal CCT determination based on its own initiative or in response to a supply's proposal to modify existing treatment or OWQPs under Rule 604f(3)(g). Each revised determination is made in writing, sets forth the new treatment requirements, explains the basis for the decision, and provides an implementation schedule for completing the treatment modifications.

c. Change in Treatment or Addition of a New Source:
Water supplies are required to notify field staff of an upcoming long-term change in treatment or the addition of a new source under Rule 604f(2)(b)(iii)(C), Rule 710a(4)(d)(vii), and Rule 710a(7)(d)(iii). Field staff may require the water supply to conduct additional monitoring or take other actions to ensure that CCT remains optimized. If the water quality and characteristics of the new source are similar to the

supply's existing sources, then field staff may consider the new source as not adversely affecting the supply's CCT and no further action is needed.

6. Consecutive Systems (CS)

Systems must monitor as per rule based on their population. On a case-by-case basis, the DEQ may consider the entire combined distribution system of consecutive systems when establishing monitoring requirements.

a. Consecutive System Approach:
Some CS own their distribution system, but essentially have no water department. These CS purchase water retail and rely fully on the seller to provide all services including monitoring, operation, and maintenance of the distribution system. The combined distribution system (CDS) is considered one system for the purpose of complying with this rule.

b. Modified Consecutive System (MCS) Approach:
Some CS own and operate their distribution system. These CS purchase water wholesale and may rely on the seller to provide certain services through a variety of arrangements and agreements. The entire CDS is treated as one system for the purpose of determining the total number of lead and copper distribution system sites and WQP distribution system sites.

The U.S. EPA allows states to propose Modified Consecutive System (MCS) monitoring protocols for these large combined distribution systems (CDS) subject to U.S. EPA approval on a case-by-case basis. Field staff should work through Lansing central staff when proposing an MCS for a particular group of supplies to ensure consistent implementation among districts and with the U.S. EPA.

c. MCS General Requirements:
   1. The entire combined distribution system (CDS) is treated as one system for the purpose of determining the number of lead and copper tap samples. The total CDS reduced number of sites must be greater than or equal to the reduced number of sites for an individual system of equal size under Rule 710a(3).
   2. The number of lead and copper distribution system sites required in each consecutive system (CS) is based on percent of population of the CDS. Each CS collects no fewer than five samples.
   3. Each CS demonstrates compliance with sample site selection, lead and copper ALs, and monitoring requirements in the distribution system. In some wholesaler/CS arrangements, the wholesale system may agree to coordinate the collection of the samples, but the CS is responsible to comply.
   4. A CS may reduce the number of sites to no fewer than the reduced number for an individual system of equal size under Rule 710a(3). In most cases a CS is not eligible to reduce the number of sites, even if the CDS is able to reduce. The MCS number of sites is usually already lower than the reduced number for an individual system of equal size.

5. A CS that exceeds an AL returns to standard number of sites for a system of equal size until both ALs are met in two consecutive six-month monitoring periods. Reduced monitoring may apply, including accelerated reduced frequency under Rule 710a(4)(d)(v). The CS may resume MCS monitoring under the CDS protocol when the CS frequency matches that of the CDS (for example, the CS may rejoin the CDS that samples triennially, when the CS qualifies for triennial monitoring).
6. The MCS approach also extends to WQP because the purpose is to look at the entire CDS.
   (a) The numbers of distribution system sites are based on the population of the CDS. However, no minimum number of distribution system sites is required in any single CS in the CDS, provided the entire CDS meets the number of sites required. Selection of WQP distribution system sites should represent the entire CDS.
   (b) A CS that exceeds an AL must also monitor the following, if not already doing so:
      - WQP distribution system monitoring: A CS that is already monitoring for WQP in the distribution system at a reduced number of sites is not required to increase to standard number of sites unless the CDS is required to do so. However, if a CS is NOT already monitoring WQP in the distribution system and they exceed an AL, the CS must monitor WQP at the standard number of sites until both ALs are met in the most recent round of sampling.
      - Entry point monitoring: WQP and entry point lead and copper samples must be collected at each entry point that serves the CS (that is, the entry point at the treatment plant, not at the consecutive connection). In order for the wholesale supply (treating/selling supply) to perform this monitoring, the CS must inform the wholesale supply that the CS exceeded an AL.
      - Medium or small CDS monitor WQP only in monitoring periods that exceeded an AL. All large CDS monitor WQP, regardless of lead and copper levels.
      - Failure to maintain OWQP at the entry points (for all large supplies and for small and medium-sized supplies that exceed an AL after installing CCT) are excursions as outlined in Rule 604f(3)(f). An excursion is a treatment technique violation.
7. A CS that exceeds the lead AL is responsible to issue PE and to replace lead service lines as per rule.
8. The wholesale supply complies with requirements associated with CCT.

PROCEDURES:

WHO	DOES WHAT
Field staff, except as listed below	Make determinations and recommend actions requiring supervisor approval.
CDW Unit Chief for CWS or NPDWS Unit Chief for NTNCWS	Review and approve field staff's designation of improper sample.
Water treatment specialist for CWS or NPDWS Unit Chief and staff for NTNCWS	Consult with field staff as field staff determine on a case-by-case basis whether a water supply has optimized CCT using equivalent CCT steps.
CWS field staff	Work with CDW Unit staff when proposing an MCS monitoring protocol.
CDW Unit staff	Coordinate with U.S. EPA to receive approval on a case-by-case basis for MCS monitoring protocol.

REFERENCES:

See Authority section of this policy.

OFFICE CHIEF APPROVAL:

_____ _____

Liane J. Shekter Smith, P.E., Chief Date
Office of Drinking Water and Municipal Assistance

DEPUTY DIRECTOR APPROVAL:

_____ _____

Jim Sygo, Deputy Director Date

From: Anderson, Madhu (DEQ)
Sent: Thursday, October 22, 2015 5:00 PM
To: Davis, Matthew (Matt); [redacted]Ken Sikkema; Chris Kolb; reynolds@mottchc.org
Cc: VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: RE: Task Force - Email 5: List of FOIA requests
Attachments: List of Flint_FOIAs.xlsx

All – the DEQ had received several Freedom of Information Requests regarding this matter. If there is a particular request that has information that you would like to see, we can provide that to you. Responses to several of these requests are voluminous.

Madhu R. Anderson
Deputy Director, Economic & Strategic Initiatives
☎ 517 284 6702 | [redacted]
✉ andersonm30@michigan.gov
DEQ

	A	B	C	D	E	F
1	FOIA#	DateLtr	FirstName	LastName	Company	Description
2	5521	7/22/2015	Curt	Guyette	American Civil Liberties Union of Michigan	Lead and copper tests in city of Flint, Jan. 2015 thru June 2015, all communications
3	6034	8/17/2015	Curt	Guyette	American Civil Liberties Union of Michigan	Water sample tests for lead and copper, City of Flint water samples from Jan. 2015 and June 30, 2015
4	6123	8/20/2015	Curt	Guyette	American Civil Liberties Union of Michigan	Lead and copper tests in city of Flint, Jan. 2015 thru June 2015, all communications, procedures for handling and testing water samples. **(DUPLICATE of 6034-15)**
5	6360	9/2/2015	Marc	Edwards	Virginia Tech	MDEQ statement to a reporter with a Flint newspaper regarding lead poisoning of Flint children
6	6422	9/4/2015	Phil	Phelps		Any waivers, permits or applications to use the Flint River as a source for water and/or drinking water for the City of Flint, etc.
7	6429	9/7/2015	Marc	Edwards	Virginia Tech	Flint lead in water: original Flint LCR report which prompted a conference call with DEQ staff, that caused Flint to revise their report, all documents regarding conference call and rationale given for invalidating two samples, etc.
8	6525	9/7/2015	Marc	Edwards	Virginia Tech	Flint lead in water situation: EPA employee Miguel Del Toral, Virginia Tech research, MDEQ press statement, ACLU's work on Flint water
9	6526	9/7/2015	Marc	Edwards	Virginia Tech	All documents discussing the need for corrosion control in Flint River water
10	6566	9/14/2015	Marc	Edwards	Virginia Tech	On July 9th, Mike Glasgow of Flint sent an e-mail saying he submitted more bottles, achieving 76 samples total for the LCR compliance. I would like to see the results of analyzing the 4-6 additional samples
11	6675	9/18/2015	Marc	Edwards	Virginia Tech	LCR sampling protocol instructions used by Flint for past 25 years
12	6797	9/25/2015	Katrinell	Davis	Department of Sociology	Annual Reports on public water System violations, consumer confidence reports for City of Flint, drinking water complaints, etc.
13	6857	9/29/2015	Curt	Guyette	ACLU of Michigan	Any waivers, permits or applications to use the Flint River as a source for water and/or drinking water for the City of Flint, etc.
14	6877	9/30/2015	Hugh	Madden	Progress Michigan	Emails between DEQ and Office of the Governor regarding water service for the City of Flint, emails sent or received by Emergency Managers as well as city officials and employees
15						
16						
17	0045	10/5/2015	Robin	Erb	Detroit Free Press	Test results and correspondence regarding the quality of the Flint City Water Supply
18	0053	10/5/2015	Ron	Fonger	Mlive Media Group	Correspondece regarding the quality of the Flint city water from January 2014 thru Sept. 21, 2015
19	0057	10/5/2015	Ryan	Felton		All communications pertaining to the quarterly test results from December 2014 til January 2015 regarding Flint water
20	0090	10/5/2015	Nancy	Kaffer	Detroit Free Press	Correspondence regarding the quality of the Flint River as a permanent water supply for the City of Flint

	A	B	C	D	E	F
21	0215	10/12/2015	Valdemar	Washington	SETTLEmate, Inc.	Analysis of the Flint River as a Permanent Water Supply for the City of Flint, July 2011
22	0317	10/15/2015	Evan	Feinauer	Natural Resources Defense Council, Inc.	Records Concerning Administration of the Safe Drinking Water Act's Lead and Copper Rules
23	0347	10/17/2015	Marc	Edwards	Virginia Tech	Emails, documents, drafting documents, letters associated with Liane Shekter Smith and Ms. Lee-Anne Walters
24	0367	10/20/2015	Marc	Edwards	Virginia Tech	All communications between July 1, 2015 and present between Brad Wurfel and Sara Wurfel concerning Flint's drinking water

From: Ken Sikkema <ksikkema@pscinc.com>
Sent: Thursday, October 22, 2015 5:12 PM
To: Anderson, Madhu (DEQ)
Cc: Davis, Matthew (Matt); erothste@grg-ltd.com; Chris Kolb; reynolds@mottchc.org; VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: Re: Task Force - Email 7: Documents related to KWA

Madhu:

Thank you for providing all of this...I know it has taken a great deal of effort, and it is much appreciated.

Ken

On Thursday, October 22, 2015, Anderson, Madhu (DEQ) <AndersonM30@michigan.gov> wrote:

All – this last email contains information on the decisions regarding the KWA by Flint.

Madhu R. Anderson

Deputy Director, Economic & Strategic Initiatives

☎ 517 284 6702 | [redacted]

✉ andersonm30@michigan.gov

DEQ

--

Ken Sikkema
Senior Policy Fellow
Public Sector Consultants
PH: 517-484-4954
ksikkema@pscinc.com

From: Anderson, Madhu (DEQ)
Sent: Thursday, October 22, 2015 5:15 PM
To: Ken Sikkema
Cc: Davis, Matthew (Matt); erothste@grg-ltd.com; Chris Kolb; reynolds@mottchc.org; VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: RE: Task Force - Email 7: Documents related to KWA

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Deputy Director, Economic & Strategic Initiatives

☎ 517 284 6702 | [redacted]

✉ andersonm30@michigan.gov

DEQ

--

Ken Sikkema
Senior Policy Fellow
Public Sector Consultants
PH: 517-484-4954
ksikkema@pscinc.com

From: Davis, Matthew (Matt) <mattdav@med.umich.edu>
Sent: Thursday, October 22, 2015 5:27 PM
To: Anderson, Madhu (DEQ); Ken Sikkema
Cc: erothste@grg-ltd.com; Chris Kolb; reynolds@mottchc.org; VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: RE: Task Force - Email 7: Documents related to KWA
Attachments: image001.png; image002.jpg

Madhu -

Let me add my thanks to Ken's.

Did you happen to find out from Nick/MDHHS whether there is s similar set of documents presently available from MDHHS?

Thanks,
Matt

From: Anderson, Madhu (DEQ) [AndersonM30@michigan.gov]
Sent: Thursday, October 22, 2015 5:14 PM
To: Ken Sikkema
Cc: Davis, Matthew (Matt); erothste@grg-ltd.com; Chris Kolb; reynolds@mottchc.org; VanSickle, Michele (GOV); Baird, Richard (GOV)
Subject: RE: Task Force - Email 7: Documents related to KWA

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[cid:image001.png@01CDA7B6.5323BD30]

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Sent: Thursday, October 22, 2015 5:12 PM
To: Anderson, Madhu (DEQ)
Cc: Davis, Matthew (Matt); erothste@grg-ltd.com; Chris Kolb; reynolds@mottchc.org; VanSickle, Michele (GOV); Baird, Richard (GOV)
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[cid:image001.png@01CDA7B6.5323BD30]
Madhu R. Anderson
Deputy Director, Economic & Strategic Initiatives
- 517 284 6702 | [redacted]

• andersonm30@michigan.gov
[http://inside.michigan.gov/deq/wr/deqforms/DEQ%20Forms/DEQ%20Logo.JPG]

--

Ken Sikkema
Senior Policy Fellow
Public Sector Consultants
PH: 517-484-4954
ksikkema@pscinc.com<mailto:ksikkema@pscinc.com>

****
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To: Davis, Matthew (Matt)
Cc: erothste@grg-ltd.com; Chris Kolb; reynolds@mottchc.org; VanSickle, Michele (GOV); Baird, Richard (GOV); Ken Sikkema
Subject: RE: Task Force - Email 8: EPA Safe Drinking Water Task Force
Attachments: EPA News Release No. OPA160.pdf

Matt - I will check into documents from MDHHS further tomorrow. If you have some specific documents in mind, would you pass that along? Hopefully we will be able to get those to you as well. And you are welcome.

All - Here is one more piece of information regarding the EPA's establishment of their own task force to provide technical assistance to Flint and Michigan's DEQ.

Madhu

-----Original Message-----
From: Davis, Matthew (Matt) [mailto:mattdav@med.umich.edu]
Sent: Thursday, October 22, 2015 5:27 PM
To: Anderson, Madhu (DEQ); Ken Sikkema
Cc: erothste@grg-ltd.com; Chris Kolb; reynolds@mottchc.org; VanSickle, Michele (GOV); Baird, Richard (GOV)
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[cid:image001.png@01CDA7B6.5323BD30]
Madhu R. Anderson
Deputy Director, Economic & Strategic Initiatives
- 517 284 6702 | 517 290 9653
- andersonm30@michigan.gov

[http://inside.michigan.gov/deq/wr/deqforms/DEQ%20Forms/DEQ%20Logo.JPG]

--

Ken Sikkema
Senior Policy Fellow
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PH: 517-484-4954
ksikkema@pscinc.com<mailto:ksikkema@pscinc.com>

****
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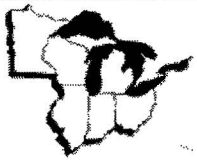
United States Environmental Protection Agency | Region 5 77 West Jackson Blvd. Chicago, Illinois 60604 | Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

EPA **Environmental NEWS RELEASE**



Contact Information: Anne Rowan, rowan.anne@epa.gov 312-353-9391

For Immediate Release No. 15-OPA160

EPA Establishes Safe Drinking Water Task Force to Provide Technical Expertise to MDEQ and City of Flint

Task Force providing technical assistance on reconnecting the Flint drinking water system to a new source

CHICAGO (October 16, 2015) - Today U.S. Environmental Protection Agency Region 5 Administrator Susan Hedman established the Flint Safe Drinking Water Task Force to provide the Agency's technical expertise through regular conversations with designated officials from Michigan Department of Environmental Quality (MDEQ) and the City of Flint. The Task Force will be led by the Region 5 Deputy Regional Administrator and will assist with developing and implementing a plan to secure water quality, including measures to optimize corrosion control. Task Force members will be available to consult with MDEQ and the City of Flint on site in Flint. The Task Force will also coordinate as necessary with federal, state and local public health agencies to assist with protection of public health.

Specifically, the Task Force will provide technical assistance to the MDEQ and the City of Flint to reconnect the Flint system to a new source of drinking water (to be supplied by the Great Lakes Water Authority) and to optimize corrosion control for the Flint system, starting in October 2015. The Task Force will also provide technical assistance to the MDEQ and the City of Flint, as needed, in advance of and following connection of the Flint water system to a new source of drinking water (to be supplied by the Karegnondi Water Authority) and to optimize corrosion control for the Flint system, starting in 2016.

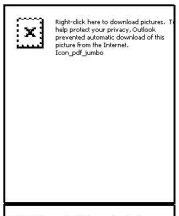
"EPA is committed to working with our state and local partners to ensure a safe and reliable drinking water supply for the residents of Flint, Michigan," Hedman said. "The formation of this task force continues our commitment to providing technical assistance to the City of Flint and the State of Michigan."

The Task Force will be comprised of scientists and technical experts from the EPA Region 5 office in Chicago, the National Risk Management Research Lab in Cincinnati and the EPA drinking water program. In addition, EPA will ask the Governor to designate a MDEQ official and the Mayor of Flint to designate a city official, to serve as points of contact for the Task Force.

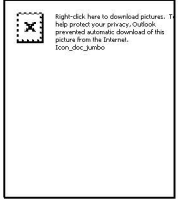
From: Madhu Anderson <notifications@ohm.basecamphq.com>
Sent: Friday, October 23, 2015 4:46 PM
To: Baird, Richard (GOV)
Subject: [Flint Water Review] New files have been uploaded

Project: Flint Water Review
Company: Flint Water

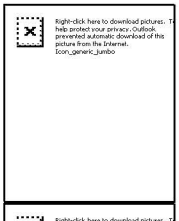
Madhu Anderson uploaded these new files:



2015-10-23 Flint Drinking Water Action Plan Update.pdf
Action Plan Update
Download this file 218 KB

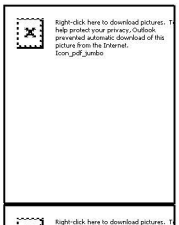


Flint Water Talking Points 100715.docx
From DHHS
Download this file 21.2 KB



FOR IMMEDIATE RELEASE State offering extended weekend hours for water filter distribution at Lippincott GCCARD.msg
From DHHS
Download this file 101 KB

FOR IMMEDIATE RELEASE Water filters available for MDHHS clients all Flint residents beginning Tuesday.msg
From DHHS
Download this file 99 KB



Week of 101915 Flint Water E-Clips.pdf
Press Clips Week of 19-23 October
Download this file 24.8 KB

Links to statutes rules etc 23Oct2015.docx
Updated List of Links to Statues, Rules, etc.
Download this file 18.6 KB

View all files for this project

This message was sent to Chris Kolb, Dana Pulver, Deborah Higgins, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matt Davis, Rich Baird, and Tracey Poteat.

Prefer plain text emails?

Delivered by Basecamp

From: Ken Sikkema <ksikkema@pscinc.com>
Sent: Monday, October 26, 2015 11:02 AM
To: Chris Kolb; Matt Davis; Eric Rothstein; Lawrence Reynolds
Cc: Baird, Richard (GOV); Anderson, Madhu (DEQ)
Subject: Goals for Task Force
Attachments: Flint Water Task Force.draftscope.211015.docx

All:

Attached please find my thinking about what should be reviewed under each major goal...I am sure this is not complete and not wedded to any of this, but wanted to get this in front of everyone as you think about it yourself...

Just a reminder....please do something similar and send to Chris and I prior to end of today...also, your thoughts on agenda for Wed am at 10am...

I'm not up-to-speed on BaseCamp yet, so am doing it this way for now...

Thank you.

--

Ken Sikkema
Senior Policy Fellow
Public Sector Consultants
PH: 517-484-4954
ksikkema@pscinc.com

(DRAFT)
FLINT WATER ADVISORY TASK FORCE
AFTER-ACTION REVIEW

The Flint Water Task Force is an independent advisory panel appointed by Governor Rick Snyder charged with reviewing actions regarding water use and testing in Flint and with offering recommendations for future guidelines to protect the health and safety of all state residents.

The task force expects to summarize its work in a report to be presented to Governor Rick Snyder within ninety (90) days.

GOALS

The Flint Water Task Force's goals are as follows:

- Complete a thorough review of all steps taken by state and local officials regarding the decision to switch the City of Flint's water source to the Flint River from the Detroit Water and Sewerage Department's system (DWSD).
  - Produce a timeline of actions
    - i. Include in this timeline the activity and information provided by individuals and entities "outside" of government, such as those by Marc Edwards, Dr. Mona Hanna-Attisha, and others.
  - Establish why each action was taken
    - i. Were decisions and actions based on adequate and relevant information? If not, why not?
    - ii. If decisions and actions were wrong, why were they wrong?
  - What steps *could* have been taken that might have preventing the problem from occurring.
  - Did "early warning signs" occur that were either ignored or simply not viewed as reasons for concern?
  - Was there a way to test the switch to the Flint River as a drinking water source, including testing at the faucet, prior to full implementation?
  - What was the status of the Flint Water Treatment Plant prior to the switch? Was it being utilized? Sitting idle? What is current status of the plant, now that switch has been made back to DWSD?

- Review the roles of the federal, state, and local officials in the decision-making process
  - Is it clear who is responsible to ensure safe drinking water?
  - Is it clear what should be done and by whom in certain situations?
  - Identify best practices for federal, state, and local officials to work together in future similar situations
  - Evaluate where coordination between these entities could have been better, and how it could be improved
  - Evaluate federal, state, and local response to other entities and individuals who were testing Flint drinking water in substance, timing, and tone

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- What would have happened—if anything—if private testing had not been done and results made public or shared with public entities?
- Ask and evaluate the following question: "Even if "best practices" were utilized and good coordination between federal, state, and local officials had taken place, would the problem likely have occurred anyway because of inadequate law and/or regulations?
- Have other cities in the United States experienced similar problems? How did they address them? Can we learn from these other experiences?

- Review federal, state, and local actions, ~~and~~ protocols, and laws
  - Determine whether the proper procedures were followed
  - Assuming proper procedures were not followed….if they had been followed, would the problem have been prevented?
  - Identify which procedures should be changed
  - Identify where federal/state/local law related to drinking water is inadequate to protect public health
    i. For example, do public water supplies "meet" federal and state drinking water standards based on testing when water leaves the treatment plant versus at the point at which people actually drink it—i.e., from the faucet?
    ii. What is the Lead and Copper Rule?
      1. How often has Lead and Copper Rule been updated? When was most recent update?
      2. Is it clear and understandable?
      3. Are testing methods clear? Are there more than one? If more than one, why?
      4. Do tests take too long in terms of when and how often they are done?
      5. Do any states/local governments have different—i.e., tougher—standards?
    iii. Is there scientific/engineering/public health dispute as to best approach to ensuring safe drinking water?

- Monitor and review the process, procedures, and protocols being followed as the City of Flint returns to the DWSD system
  - Ensure that proper corrosion controls and testing are in place
    i. Is it clear what constitutes "proper" corrosion control? Is "proper" corrosion control the same as "optimized" (current EPA language) corrosion control?
  - Highlight the appropriate actions that the City of Flint should follow when the future switch is made to the Karegnondi Water Authority's system

- Assess future practices
  - Highlight practices that should change for communities in similar situations
  - Recommend changes in law, procedure, or practice to ensure all Michiganders are drinking safe water
- Is Flint an indication of wider drinking water infrastructure problems in Michigan?
-

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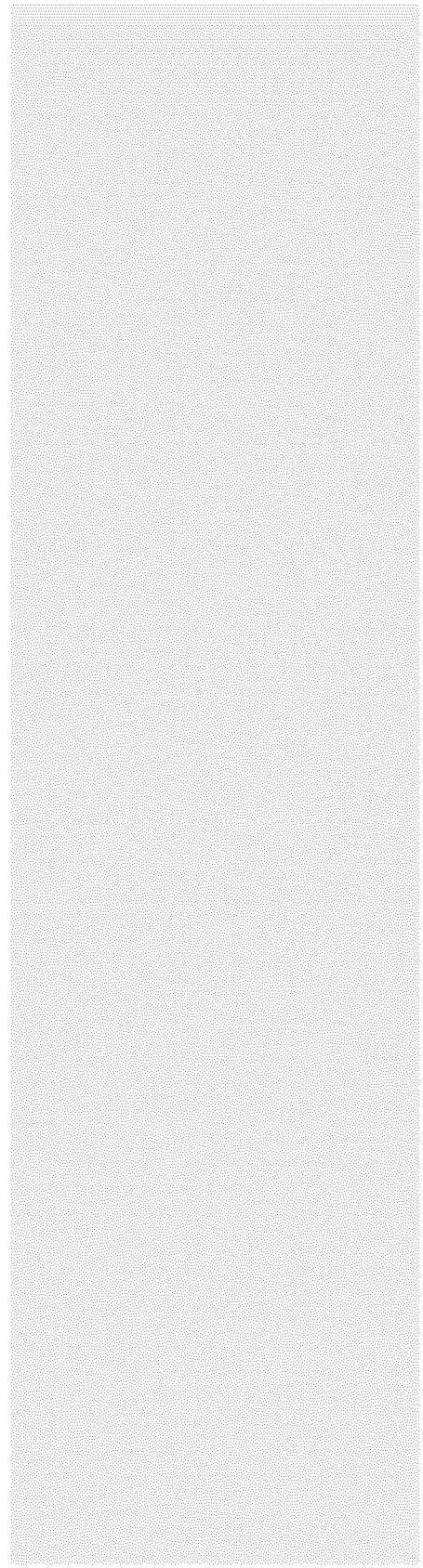
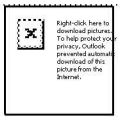


From: Ken Sikkema <notifications@ohm.basecamphq.com>
Sent: Monday, October 26, 2015 3:16 PM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Advisory Task Force] Flint Water Advisory Task Force Meeting

Reply ABOVE THIS LINE to add a comment to this event

Project: Flint Water Advisory Task Force
Company: Flint Water



Ken Sikkema commented on the event:
Flint Water Advisory Task Force Meeting

Please note that the Task Force Meeting on Wednesday will begin at 10am, not 11am as posted...Ken

This comment was sent to Chris Kolb, Deborah Higgins, Eric Rothstein, Ken Sikkema, Larry Reynolds, Matt Davis, Michele VanSickle, and Rich Baird.

Stop receiving emails when comments are posted to this event. Prefer plain text emails?

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From: VanSickle, Michele (GOV)
Sent: Monday, October 26, 2015 3:42 PM
To: Baird, Richard (GOV)
Subject: FW: [Flint Water Advisory Task Force] Flint Water Advisory Task Force Meeting

Rich, are you planning to attend the Flint Water Task Force meetings? This one is in Flint on Wed. Oct. 28 at 10 am.

Michele VanSickle
Executive Assistant for Richard Baird and Mike Finney
Executive Office of Governor Rick Snyder
(517) 241-5621
vansicklem2@michigan.gov

From: Ken Sikkema [mailto:notifications@ohm.basecamphq.com]
Sent: Monday, October 26, 2015 3:16 PM
To: VanSickle, Michele (GOV) <vansicklem2@michigan.gov>
Subject: Re: [Flint Water Advisory Task Force] Flint Water Advisory Task Force Meeting

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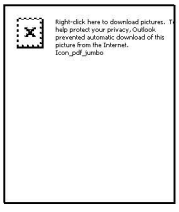
From: Larry Reynolds <notifications@ohm.basecamphq.com>
Sent: Monday, October 26, 2015 4:00 PM
To: Baird, Richard (GOV)
Subject: [Flint Water Advisory Task Force] A new file has been uploaded

Project: Flint Water Advisory Task Force
Company: Flint Water

Larry Reynolds uploaded a new file:



2000U1XC.pdf

10 yr old EPA SDWA Plan for schools and daycare

Download this file 3.19 MB

Category: General Background

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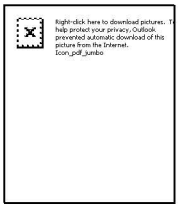

Pediatrics-2005--1036-46.pdf

AAP LEAD POLICY

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Category: General Background

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Delivered by Basecamp

From: Eric Rothstein [redacted]>
Sent: Monday, October 26, 2015 6:45 PM
To: Ken Sikkema; Chris Kolb; Matt Davis; Lawrence Reynolds
Cc: Baird, Richard (GOV)
Subject: Re: Goals for Task Force
Attachments: FWATF - Goals_Questions_Work Plan - EPR.docx

Y'all,

Without having had an opportunity to review Ken's contribution, I thought I would pass along my initial cut at some thoughts on questions / work plan for your review and consideration. I would like to flesh this out further but this may give some idea of the questions / approach ideas that arose during my weekend reading sessions.

As for agenda ideas, a few items — some of which have already been noted:

- Basecamp orientation (5 min)
- OMA / FOIA review (already identified)
- Protocol for addressing issues that may identify potential liabilities
- Defining how our review differs/complements/ etc the seeming multitude of other reviews
- Calendar

Lastly, a couple of clarifications / apologies regarding Basecamp:

1. By way of apology, I live under the illusion that my home is in Chicago and so my computer is set to Central Standard Time. On my calendar, our meeting on Wed. shows up as 10:00 a.m. but I think Basecamp converted it to 11:00 EST on your machines. My apologies for the confusion — and thanks to Ken for the correction.
2. We have set up 2 projects (so far) in Basecamp. The first is just for us — the Flint Water Advisory Task Force (and Rich B.). I thought this might be useful if we wanted to be able to have exchanges among the core task force membership. The second project, Flint Water Review, includes everyone that was on the earlier distributed roster (and their aides). Sorry for any confusion there.

I will also post the attached to the task force project — and hope to have some further thoughts /revisions tomorrow night.

Please let me know if you have any questions or concerns.

- Eric

Eric P. Rothstein, CPA
GLWA Implementation Planning Program Manager
Galardi Rothstein Group - Principal
3300 N. Lake Shore Drive, Unit 6C
Chicago, IL 60657

iPhone: [redacted]
E-Mail: [redacted]
Web: www.grg-itd.com

From: Ken Sikkema <ksikkema@pscinc.com>
Date: Monday, October 26, 2015 at 10:02 AM
To: Chris Kolb [redacted], "Matthew M. Davis" [redacted], Eric Rothstein

[redacted]>, Laurence Reynolds [redacted]
Cc: Rich Baird <bairdr@michigan.gov>, "Madhu R. Anderson" [redacted]
Subject: Goals for Task Force

All:

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Ken Sikkema
Senior Policy Fellow
Public Sector Consultants
PH: 517-484-4954
[redacted]

FLINT WATER ADVISORY TASK FORCE
GOALS – POTENTIAL QUESTIONS – WORK PLAN IDEAS

Contribution by Eric Rothstein
Galardi Rothstein Group

NO.	GOAL	QUESTIONS	WORK PLAN
1	**Complete a thorough review of all steps taken by state and local officials regarding the decision to switch the City of Flint's water source to the Flint river from the Detroit Water and Sewerage Department's system (DWSD).** • Produce a timeline of actions • Establish why each action was taken	What was the basis of cost analysis and what independent reviews were conducted to validate investment? Why use of interim supply – disconnect from DWSD before KWA available? How do rules / protocols regarding local control enable discount of regional economies? Why were permits granted with extensive regional over-capacity?	Review cost analysis performed for transfer to KWA. Conduct interviews / review documents supporting / approving water withdrawal permit and KWA investment. Conduct interviews (MDEQ, Flint, DWSD, EPA) to determine reasons for time periods between actions. Review qualifications / expertise of parties involved in decision-making.
2	**Review the roles of the federal, state, and local officials in the decision-making process** • Identify best practices for federal, state, and local officials to work together in future similar situations • Evaluate where coordination between these entities could have been better, and how it could be improved	Why was flag not raised when GM disconnected? Were lessons learned by other industry water source change problems considered? How did MDEQ address Paragraph 5 (c) of its LCR Implementation guidance regarding changes in water source? Sequence, timing of approvals by City, Emergency Manager? Explain Miguel del Toral communication and response?	Interview Marc Edwards, Va Tech and review documentation of timeline presented in "Commentary: *MDEQ Mistakes and Deception Created the Flint Water Crisis*" in Flint Water Updates and "When did state know about lead in Flint water? 6 takeaways from Snyder plan." * Develop more comprehensive timeline that clarifies timing/efforts of City's TAC, MDEQ responses, etc. Review briefing information provided to State / local officials.

DRAFT

3	**Review federal, state, and local actions and protocols** • Determine whether the proper procedures were followed • Identify which procedures should be changed	Why doesn't LCR speak to potential for problems with change in water supply? Are timelines reasonable for circumstances with potential for water chemistry changes? Why does language focus on enabling reduced monitoring rather than focus on high-risk situations? What precipitated the differing statements on Flint's CCT? What information is available on non-water based sources of lead contamination? What was basis for statement that ***elevation*** of levels was not caused by water? Is there an inherent conflict of interest if the water supplier is responsible for selecting sampling sites?	Obtain independent estimates of costs for CCT. (Cornwell of NDWAC quoted as indicating limited cost, but phosphates not preferred due to other WQ effects.) Obtain comparison of MI procedures relative to those used in other states. Obtain documentation of GM withdrawal from use of Flint WTP produced water and responses. Conduct related interviews of GM, City, MDEQ personnel. Interviews / reviews of documentation of testing of WQ and lead levels (e.g., testing of Dr. Mona Hanna-Attisha showing spike in blood-lead levels in Flint children).
4	**Monitor and review the process, procedures, and protocols being followed as the City of Flint returns to the DWSD system** • Ensure that proper corrosion controls and testing are in place • Highlight the appropriate actions that the City of Flint should follow when the future switch is made to the Karegnondi Water Authority's system	Obtain Action Plan details and review protocol of EPA, MDEQ, etc. NDWAC review – and consideration of lessons learned from DC Water, other utilities).	

DRAFT

5	**Assess future practices** • Highlight practices that should change for communities in similar situations • Recommend changes in law, procedure, or practice to ensure all Michiganders are drinking safe water	How to promote optimization of regional excess capacity? How to ensure more timely response in cases where potential problems identified? What is basis for 2 six-month monitoring periods (seeming to invite 1 year or more of unattended problem?) Why are high-risk populations / sites (e.g., schools, hospitals) not subject to specific testing in standard protocol?	

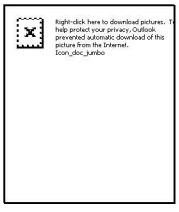
* *Also ENR. Com (10/11/20) "Many Missed Opportunities To Fix Water Crisis in Flint, MI.*

DRAFT

From: Eric Rothstein <notifications@ohm.basecamphq.com>
Sent: Monday, October 26, 2015 6:54 PM
To: Baird, Richard (GOV)
Subject: [Flint Water Advisory Task Force] A new file has been uploaded

Project: Flint Water Advisory Task Force
Company: Flint Water

Eric Rothstein uploaded a new file:



FWATF - Goals_Questions_Work Plan - EPR.docx

Questions-Work Plan Ideas - v1 - Rothstein

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This message was sent to Chris Kolb, Dana Pulver, Deborah Higgins, Ken Sikkema, Larry Reynolds, Matt Davis, Michele VanSickle, Rich Baird, and Tracey Poleat.

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From: Larry Reynolds <notifications@ohm.basecamphq.com>
Sent: Tuesday, October 27, 2015 10:47 AM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Advisory Task Force] FW: Goals for Task Force

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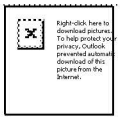
Project: Flint Water Advisory Task Force
Company: Flint Water



Larry Reynolds commented on the message:
FW: Goals for Task Force

Thank you for this framework for inquiry. I suggest several other questions.

1- When was the 9 mile ,Flint owned connection to the Detroit water supply sold to Genesee county ?

2- Did that action eliminate the possibility of reconnecting or increase the cost ?

3- What was the selling price and how were the proceeds applied or saved ?

4- Why would the pipeline be built before city infrastructure was improved ?

5- Why was there a rush to disconnect from Detroit by either party when Highland Park was never disconnected from Detroit despite being in arrears ?

6- What were the communications between then MDCH and MDEQ regarding water quality, health concerns, and other similar problems 8-10 years prior ?

This comment was sent to Chris Kolb, Dana Pulver, Deborah Higgins, Eric Rothstein, Ken Sikkema, Larry Reynolds, Matt Davis, Michele VanSickle, Rich Baird, and Tracey Poteat.

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From: Chris Kolb [redacted]
Sent: Tuesday, October 27, 2015 2:55 PM
To: Ken Sikkema
Cc: Matt Davis; Eric Rothstein; Lawrence Reynolds; Baird, Richard (GOV); Anderson, Madhu (DEQ)
Subject: Re: Goals for Task Force
Attachments: Draft Questions for Flint Water TF.docx

A day late, but here are my questions. They are not quite under the draft scope/goals, they are more chronological.

On Mon, Oct 26, 2015 at 11:02 AM, Ken Sikkema [redacted] wrote:
All:

Attached please find my thinking about what should be reviewed under each major goal...I am sure this is not complete and not wedded to any of this, but wanted to get this in front of everyone as you think about it yourself...

Just a reminder....please do something similar and send to Chris and I prior to end of today...also, your thoughts on agenda for Wed am at 10am...

I'm not up-to-speed on BaseCamp yet, so am doing it this way for now...

Thank you.

--

Ken Sikkema
Senior Policy Fellow
Public Sector Consultants
PH: 517-484-4954
[redacted]

--
Chris Kolb, President & CEO
Michigan Environmental Council
602 W. Ionia
Lansing, MI 48933

517.487.9539 (office)
517.487.9541 (fax)
[redacted](cell)

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www.environmentalcouncil.org
www.twitter.com/ckolb
www.twitter.com/michenvcouncil

Main goals and objectives: Get to the bottom of what happened and why, and how to prevent in the future?

Establish a consensus document in chronological order of the steps taken by local, state and federal officials regarding the switch of water sources and the water testing requirements along the way.

Decision to switch from DWSD to KWA

What was the plan for drinking water until the KWA was up and running?

Decision to switch to Flint River

Establish what the current rule requirements are for a local unit of government to switch from one water source to another.

- Establishes whether those requirements were followed in this case.
- Some press reports note a difference between cities with populations above 50,000 versus those below. How do the requirements change? Is there a legitimate basis for that distinction?

Who made the decision to switch to Flint River? What criteria or information did they consider or use in making that decision?

When switching water sources, what is the best or industry standard to evaluate the potential water source for human consumption? What tests need to be completed before going ahead with the switch?

Between the time that the contract with DWSD was cancelled and the Flint River was used as the water source, what was happening during this time period? Was the Flint River water being tested, analyzed, etc.?

When was the Flint River authorized as a drinking water source? Was an operating permit issued and under what conditions?

What procedures were in place for the switch to Flint River?

What was the physical condition of the Flint Water Treatment Plant?

What expertise was available, internally and externally, to evaluate switch and implement the switch?

What was known of the water chemistry of the Flint River?

Was lead (and copper) ever discussed as a possible problem with the switch?

Was anyone one thinking about the water from the public water line to the drinking source/inside facet?

What information on lead service leads is known to the city, have heard it is on file cards not electronically?

When did lead (Pb) enter the discussion?

What should trigger a concern with lead in supplying drinking water?

What did EPA say and do, draft memo from Miguel del Toral—what happened between writing memo and non-issuance?

Corrosion control: Who said or thought that lime was significant enough to constituent corrosion control? Why did the state/DEQ say there was corrosion control and then reversed itself later on?

GM ends use of Flint water, did anyone ask why and what the implications were? The water was corroding the new parts, obviously something was wrong. Did anyone think or wonder what this meant?

What is the public's role in ensuring safe drinking water?

- How were FOIA's handled?
- How did state officials respond to information which raised questions regarding current practices?

What was the reaction to outside information/data that suggested there was a problem? What did staff at both the city and state do when they heard/received the information from U of M Flint, Hurley, Marc Edwards, etc.?

What was the reaction to citizens/residents complaints about the water?

What was the decision-making atmosphere/environment? Was it a "make it work" scenario or were concerns welcomed and dealt with openly?

How does this program interact with other state and local programs designed to reduce the risk of lead exposure.

- Evaluate the basis for the allowable lead level in water and how "meeting the standard" should be characterized by state and local officials.
- What is the current understanding regarding sources of lead and exposure of children and the contribution from lead in water?
- How is data regarding children with elevated lead currently tracked and shared?

Decision-making Going Forward

How do we improve the system of protecting the public moving forward?

Is six-month testing intervals the right time frame or should they be shortened if there is a variable change, i.e., Pb levels going up…how should you monitor or proceed when there is significant change?

Should a water source switch be allowed without testing before hand?

Who is responsible for health implications? What are the roles of EPA, DEQ, MDHHS, City of Flint (Administration & Water Dept.), Local Health Department? MDEQ looks at test results but do they translate those to actual health concerns?

What expertise does or should the state have on staff to be able to evaluate drinking water issues like this; going above just knowing the statutes and regulations, real world experience in water treatment systems? Evaluating permits and test results is different than knowing what they are telling you.

What are the challenges presented by lead pipes from a funding aspect?

- What can we learn from other cities that have addressed this issue, such as Lansing?
- Can federal money be used to address this issue?
- What information can we glean from asset management plans being prepared across the state?
- To the extent lead pipes are an issue in otherwise financially distressed communities, does this make addressing the issue more difficult?

Establish what the current requirements are for testing for lead in the water, the source, at the home and in public places.

- Evaluate discretion currently in the law regarding how testing is done, i.e. decisions regarding which homes are tested and when are test results nullified.
- How are data bases maintained regarding the existence of lead pipes in the system? Are home and business owners made aware of lead pipes leading to their dwelling of building?

From: Madhu Anderson <notifications@ohm.basecamphq.com>
Sent: Wednesday, October 28, 2015 4:27 PM
To: Baird, Richard (GOV)
Subject: [Flint Water Review] City of Flint Technical Advisory Committee

Reply ABOVE THIS LINE to add a comment to this message

Project: Flint Water Review
Company: Flint Water

Madhu Anderson posted a new message:
City of Flint Technical Advisory Committee

Howard Croft, Public Works Director - City of Flint, organizes the City of Flint's Technical Advisory Committee. There are members from a broad spectrum of expertise. DEQ has a representative on this Committee. The next meeting is tentatively scheduled for November 11, at Flint City Hall, at 2 pm, per an email our staff received. I will post this on the calendar as well.

This message was sent to Chris Kolb, Eric Rothstein, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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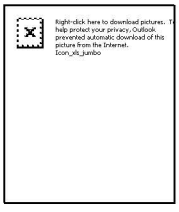
From: Eric Rothstein <notifications@ohm.basecamphq.com>
Sent: Wednesday, October 28, 2015 11:52 PM
To: Baird, Richard (GOV)
Subject: [Flint Water Advisory Task Force] A new file has been uploaded

Project: Flint Water Advisory Task Force
Company: Flint Water

Eric Rothstein uploaded a new file:



FWATF Potential Interviewees Listing.xlsx

Initial Listing of Interviewees - EPR

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This message was sent to Chris Kolb, Dana Pulver, Deborah Higgins, Ken Sikkema, Larry Reynolds, Matthew Davis, Michele VanSickle, Rich Baird, and Tracey Poleat.

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From: Eric Rothstein <notifications@ohm.basecamphq.com>
Sent: Thursday, October 29, 2015 9:06 AM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

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Project: Flint Water Review
Company: Flint Water

Eric Rothstein commented on the message:
City of Flint Technical Advisory Committee

I think it would be helpful for my understanding of roles in perspective to attend this meeting. Is it open to the public or can we arrange for attendance? My thought would also be to try to conduct one or more of our interviews on the same trip to Flint. Does this make sense to folks?

– Eric

Eric P. Rothstein, CPA
GLWA Implementation Planning Program Manager
Galardi Rothstein Group – Principal
3300 N. Lake Shore Drive, Unit 6C
Chicago, IL 60657

iPhone: [redacted]
E-Mail: erothste@grg-ltd.com
Web: www.grg-ltd.com

This comment was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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From: Ken Sikkema <notifications@ohm.basecamphq.com>
Sent: Thursday, October 29, 2015 9:08 AM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

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Project: Flint Water Review
Company: Flint Water

Ken Sikkema commented on the message:
City of Flint Technical Advisory Committee

Eric:

I agree…

On Thursday, October 29, 2015, Eric Rothstein <

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From: Ken Sikkema <notifications@ohm.basecamphq.com>
Sent: Thursday, October 29, 2015 10:54 AM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

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Project: Flint Water Review
Company: Flint Water

Ken Sikkema commented on the message:
City of Flint Technical Advisory Committee

Madhu:

The Task Force would like to attend this meeting--not all of us, probably Eric...Can you arrange that? Should we contact Howard Croft directly?

Ken

This comment was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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From: Larry Reynolds <notifications@ohm.basecamphq.com>
Sent: Thursday, October 29, 2015 11:27 AM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

Reply ABOVE THIS LINE to add a comment to this message

Project: Flint Water Review
Company: Flint Water

Larry Reynolds commented on the message:
City of Flint Technical Advisory Committee

. I agree it would be valuable to attend so we know the local participants . I was invited to join the TAC and participated in the last meeting.

This comment was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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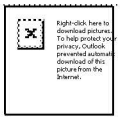
From: Madhu Anderson <notifications@ohm.basecamphq.com>
Sent: Thursday, October 29, 2015 11:54 AM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

Reply ABOVE THIS LINE to add a comment to this message

Project: Flint Water Review
Company: Flint Water



Madhu Anderson commented on the message:
City of Flint Technical Advisory Committee

Larry – I was just informed that the meeting may have been moved to November 9 to accommodate EPA staff schedules. Do you know about this scheduling change?

Madhu
Madhu R. Anderson
Deputy Director, Economic & Strategic Initiatives
Michigan Department of Environmental Quality
Phone 517 284 6702 | [redacted]
andersonm30@michigan.gov<mailto:andersonm30@michigan.gov>

This comment was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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From: Larry Reynolds <notifications@ohm.basecamphq.com>
Sent: Thursday, October 29, 2015 11:57 AM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

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Project: Flint Water Review
Company: Flint Water

Larry Reynolds commented on the message:
City of Flint Technical Advisory Committee

No.Will check with Howard Croft.

This comment was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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From: Ken Sikkema <notifications@ohm.basecamphq.com>
Sent: Thursday, October 29, 2015 12:01 PM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

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Project: Flint Water Review
Company: Flint Water

Ken Sikkema commented on the message:
City of Flint Technical Advisory Committee

Madhu:

Can you arrange for someone from the Task Force to attend?

This comment was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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From: Madhu Anderson <notifications@ohm.basecamphq.com>
Sent: Thursday, October 29, 2015 12:14 PM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

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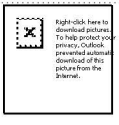
Project: Flint Water Review
Company: Flint Water



Madhu Anderson commented on the message:
City of Flint Technical Advisory Committee

Ken - I can certainly facilitate and request Eric's attendance. I see that Larry is also a participant. Let me confirm the date/time as well.

This comment was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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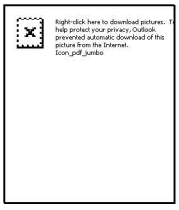
From: Madhu Anderson <notifications@ohm.basecamphq.com>
Sent: Thursday, October 29, 2015 1:39 PM
To: Baird, Richard (GOV)
Subject: [Flint Water Review] A new file has been uploaded

Project: Flint Water Review
Company: Flint Water

Madhu Anderson uploaded a new file:



10.20.2015-Letter-Ananich-AG-Ringler-FINAL.PDF

OAG - Audit Scope

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This message was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Matthew Davis, and Rich Baird.

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From: Madhu Anderson <notifications@ohm.basecamphq.com>
Sent: Thursday, October 29, 2015 1:48 PM
To: Baird, Richard (GOV)
Subject: [Flint Water Review] Auditor General Audit Scope

Reply ABOVE THIS LINE to add a comment to this message

Project: Flint Water Review
Company: Flint Water

Madhu Anderson posted a new message:
Auditor General Audit Scope

The Auditor General has two ongoing efforts relating to the DEQ's Office of Drinking Water and Municipal Assistance. The first is a performance audit that was initiated in April 2015 (project 761-0320-15). The second effort was initiated this past week and relates to the letter (uploaded today) from Senator Ananich that poses four specific questions.

This message was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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From: Madhu Anderson [notifications@ohm.basecamphq.com]
Sent: Friday, October 30, 2015 8:55 AM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

Reply ABOVE THIS LINE to add a comment to this message

Project: Flint Water Review
Company: Flint Water

Madhu Anderson commented on the message:
City of Flint Technical Advisory Committee

Ken and Eric - below is the response from Howard Croft. '
Eric - should I send your name as the attendee...does any other task force member wish to attend?

Mr. Anderson,

We welcome the addition of a Task Force member to the Technical Advisory Team. I am sending you a copy of the weekly updates that have been distributed since our last Technical Advisory Committee meeting.

The meeting this month will be **Monday November 9th - 2:00 pm at Flint City Hall (3rd Floor).**
I will send out an agenda next week along with the weekly report.

We look forward to your participation.

On Fri, Oct 30, 2015 at 7:57 AM, Howard Croft <hcroft@cityofflint.com> wrote:

Mr. Anderson,

We will look forward to the addition

On Thu, Oct 29, 2015 at 1:59 PM, Anderson, Madhu (DEQ) <AndersonM30@michigan.gov> wrote:

Howard – I am writing on behalf the Flint Water Task Force, an independent advisory panel appointed by Governor Snyder that is completing an after-action review of water use and testing in Flint. If possible, the Flint Water Task Force would like to send a representative to attend the next meeting of the City of Flint's Technical Advisory Committee. I understand that Dr. Reynolds is already a participant (and is also a member of the Governor's panel), but would like to include an additional member. Thank you for your consideration. If you would send me the date, location, and time of the meeting, I will pass it along and then confirm with you the contact information for the member that will attend your Technical Advisory Committee meeting.

Regards,

TAC Update 10_12_15.pdf
204 KB

TAC Update 10_19_15.pdf
207 KB

TAC Update 10_28_15.pdf
371 KB

This comment was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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From: Ken Sikkema <notifications@ohm.basecamphq.com>
Sent: Friday, October 30, 2015 9:50 AM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

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Project: Flint Water Review
Company: Flint Water

Ken Sikkema commented on the message:
City of Flint Technical Advisory Committee

All:

Along the line of Eric's suggestion, let's think about the possibility of utilizing this November 9th meeting in Flint as an opportunity to interview others….I would certainly like Eric to attend, assuming his availability, but others might also want to attend and maybe we could interview several Flint area individuals that way…

Probably best if we have a list of standard questions prior…

I'll use this opportunity to remind everyone of the following follow-up to our Wed meeting:

1. Matt is using the construct he put on the whiteboard to organize all of the questions that were submitted earlier.

2. Eric is putting together a skeleton timeline, to which Dr. Reynolds will be making some additions…I'm sure the rest of us will like to do so, as well.

3. Minutes of our meeting will be distributed shortly.

4. We scheduled a meeting for every Wednesday at PSC…9:30 to 12 noon…if we feel we don't need to meet every week, we will make that decision as we go…Matt, I think you had left prior to our discussion of this…can you make the 9:30 start? Next meeting is Wednesday, November 4…I will distribute a tentative agenda prior to our meeting…

5. November 9 Flint Technical Group in Flint

Did I capture it all?

This comment was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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From: Larry Reynolds <notifications@ohm.basecamphq.com>
Sent: Friday, October 30, 2015 11:39 AM
To: Baird, Richard (GOV)
Subject: Re: [Flint Water Review] City of Flint Technical Advisory Committee

Reply ABOVE THIS LINE to add a comment to this message

Project: Flint Water Review
Company: Flint Water

Larry Reynolds commented on the message:
City of Flint Technical Advisory Committee

Sufficiently for me.

This comment was sent to Chris Kolb, Eric Rothstein, Ken Sikkema, Larry Reynolds, Madhu Anderson, Matthew Davis, and Rich Baird.

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From: Eric Rothstein [redacted]
Sent: Friday, October 30, 2015 6:25 PM
To: VanSickle, Michele (GOV)
Cc: Baird, Richard (GOV)
Subject: Re: [Flint Water Advisory Task Force] A new file has been uploaded

Michele & Rich,
The notice was to let y'all know of our standard meeting scheduling. Let's make it easy on Rich with a protocol that says he is always welcome but if needed for something specific, I (or Ken S.) will reach out.

Sent from my iPhone

On Oct 30, 2015, at 1:14 PM, VanSickle, Michele (GOV) <vansicklem2@michigan.gov> wrote:

> Eric, Rich mentioned that he may not need to attend every Flint Water Task Force meeting. Can you please tell us which meetings in November you would like him to attend? My last day with Rich is Nov. 6 and I am trying to firm up his November calendar before I leave.
>
> Thanks.
>
> **Michele VanSickle**
> Executive Assistant for Richard Baird and Mike Finney
> Executive Office of Governor Rick Snyder
> (517) 241-5621
> vansicklem2@michigan.gov
>
> **From:** Eric Rothstein [redacted]
> **Sent:** Wednesday, October 28, 2015 11:52 PM
> **To:** VanSickle, Michele (GOV) <vansicklem2@michigan.gov>
> **Subject:** [Flint Water Advisory Task Force] A new file has been uploaded
>
> Project: Flint Water Advisory Task Force
> Company: Flint Water
>
> Eric Rothstein uploaded a new file:
>
> **FWATF Potential Interviewees Listing.xlsx**
> Initial Listing of Interviewees - EPR
> Download this file 33.6 KB
>
> View all files for this project

This message was sent to Chris Kolb, Dana Pulver, Deborah Higgins, Ken Sikkema, Larry Reynolds, Matthew Davis, Michele VanSickle, Rich Baird, and Tracey Poteat.

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From: Eric Rothstein <notifications@ohm.basecamphq.com>
Sent: Monday, November 02, 2015 1:26 PM
To: Baird, Richard (GOV)
Subject: [Flint Water Advisory Task Force] Initial / Skeletal Timeline

Reply ABOVE THIS LINE to add a comment to this message

Project: Flint Water Advisory Task Force
Company: Flint Water

Eric Rothstein posted a new message:
Initial / Skeletal Timeline

Y'all,

Attached is an initial timeline document that I compiled over the weekend. I have a bunch more to add -- including the details of the e-mails identified through FOIA requests - but I am unlikely to be able to get much more done before our meeting on Wed. morning given some other project commitments. SO -- I thought I would pass this along for you to scan and let me know if you think the basic format works.

Thanks,

-Eric

Flint Water Master Timeline v1 EPR.xlsx
32.9 KB

This message was sent to Chris Kolb, Dana Pulver, Deborah Higgins, Eric Rothstein, Ken Sikkema, Larry Reynolds, Matthew Davis, Michele VanSickle, Rich Baird, and Tracey Poteat

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